

JPRS-UEA-86-032

25 SEPTEMBER 1986

USSR Report

ECONOMIC AFFAIRS

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ECONOMIC POLICY, ORGANIZATION, AND MANAGEMENT

ECONOMISTS, MANAGERS DISCUSS ECONOMIC REFORM PROBLEMS

Reform's Main Thrust

Moscow EKONOMICHESKAYA GAZETA in Russian No 18, Apr 86 pp 6-7

[Editor's introduction and articles by D.M. Gvishiani, member of the USSR Academy of Sciences, and V.P. Mozhin, member of VASKhNIL and deputy general director of the Moscow Motor Vehicle Plant imeni Likhachev]

[Text] "Economic management, and this is obvious," it was noted in the Policy Report of the CPSU Central Committee to the 27th Party Congress, "is in need of constant improvement. But the situation at present is such that the effort cannot be confined to partial improvements; a radical reform is required. Its purpose would be to effectively subordinate our entire production to the needs of society, to satisfy people's needs, directing management toward raising efficiency and quality, toward acceleration of scientific-technical progress, toward development of the workers' interest in the results of work, development of initiative and social enterprise in every unit of the economy and above all in work collectives."

The main lines of the revamping of the economic mechanism were defined by the 27th CPSU Congress, and it has begun to be carried out.

The further shaping of the new economic mechanism, which will guarantee full utilization of the advantages of the socialist system, and acceleration of the country's socioeconomic development are at the center of attention of the party and millions of Soviet people. These questions are a challenge for economists, both scientists and practitioners, for specialists in all sectors of the economy, and for leaders in the party and economy. All of this makes it indispensable to conduct broad discussion of the ways and methods of carrying out the reform of the economic mechanism and of working out specific practical proposals for its implementation.

In today's publication of the articles by D.M. Gvishiani, member of the USSR Academy of Sciences, V.P. Mozhin, member of VASKhNIL, and A.I. Buzhinskiy, deputy general director of the Moscow Motor Vehicle Plant imeni Likhachev, and a special supplement on the experience of the Sumy NPO, which contain a number of important principles for shaping an integral management system, the editors also propose a further broad and frank discussion in the pages of

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EKONOMICHESKAYA GAZETA about the best and most effective way to perform the tasks of the reform, to analyze the state of affairs and to expose the unsolved problems that are standing in the way of faster economic growth.

Differing points of view as to the nature of the problem and specific proposals on shaping the particular parts of the reform will be helpful in developing and implementing the new and effective economic mechanism.

The editors call upon all economists and specialists in other professions who work in production enterprises, associations, ministries, and departments, in scientific research and design organizations, in planning-financial and statistical bodies, upon party officials and workers in the economy, upon all our readers to take the most active part in the discussion, whose purpose is to do everything necessary to carry out the decisions of the 27th CPSU Congress.

We await your letters, dear comrades!

D.M. Gvishiani--A New Stage in Development of the Economic Mechanism

The conception of the thorough revamping of the economic mechanism and of creation of an integral, effective, and flexible system of management making it possible to realize more fully the capabilities of socialism occupies a most important place in the decisions of the 27th CPSU Congress, which define the character and set the pace of our country's socioeconomic development for many years to come. If the tasks and essence of the immense effort that lies ahead in the radical improvement of all elements of the management system are to be thoroughly grasped, the objective causes and basic factors making this revamping necessary need to be seen clearly.

The most important of these reasons is the party's economic strategy adopted by the congress, a strategy aimed at a substantial acceleration of the country's socioeconomic development and at intensification of social production. Thus the entire economy, seen as an object of management, will undergo change. It is natural that the system for management of the economy, which took shape in the stages of its extensive development, must also undergo corresponding changes.

Management must above all see that the party's strategic course toward acceleration of the country's socioeconomic development and a qualitative restructuring of production on the basis of scientific-technical progress is carried out.

Instead of predominant orientation toward enlistment of additional resources, the goal being set is that of the most economical and efficient utilization of existing resources. Instead of the predominant orientation toward increasing the number of products produced, it should above all be toward improving the quality of goods and services. Instead of a heedless orientation toward solving production problems to the exclusion of all else, the problems of scientific-technical and social development are taking on an ever greater role.

The effort to restructure the system for management of the economy must be carried out on the sound theoretical foundation of Marxism-Leninism and on a summarization of the most abundant experience gained in the USSR. It is equally important in this effort to take into account present-day domestic and international conditions, the goals of improving socialist society, and the main lines of economic and social development of our country and of the entire socialist commonwealth.

In this connection the 27th CPSU Congress set extremely important tasks for economic science. As pointed out in the policy report of the CPSU Central Committee to the congress there is a need to define more precisely on the basis of the requirements of reality, and if necessary even revise a number of theoretical representations and conceptions. This applies to such major problems as the interaction between the productive forces and production relations, socialist ownership and the economic forms it takes, commodity-money relations, the combination of centralism and independence of economic organizations, and others.

Back in the first years of Soviet power V.I. Lenin emphasized the particular importance of setting up "an extremely complicated and precise network of new organizational relations embracing the planned production and distribution of products..." (Vol 36, p 171). Not only does this network of relations have to be set up, but it needs to be developed in a planned way in accordance with changing conditions and tasks.

In order to bring the forms and methods of management in the conduct of economic activity into conformity with present-day requirements, the 27th party congress ordered the CPSU Central Committee and USSR Council of Ministers to carry out an interrelated set of steps in the very near future. The policy report of the CPSU Central Committee and the resolution of the congress adopted concerning it defined the main directions and goals of the work to be done.

The task of increasing the effectiveness of centralized management in performance of the principal tasks of the party's economic strategy and at the same time of enhancing the role and independence of associations and enterprises has been posed as the paramount orientation in revamping the economic mechanism.

Strengthening the effectiveness of nationwide and sectoral bodies for management of the economy requires a fundamental restructuring of their work.

Since many fundamental advantages of a planned economy are realized through the activity of these bodies, their role needs to be enhanced in guaranteeing proportions, the internal consistency of the national economy, and the optimum combination of nationwide, sectoral, and regional interests, and in overcoming various hitches. This applies above all to USSR Gosplan. As pointed out at the congress, Gosplan is in effect being called upon to become an authentic scientific-economic command headquarters for the country, one which would be free of current economic problems.

The central management authorities must not get involved in trifling interference with associations and enterprises or try to solve the numerous problems of day-to-day management. An appearance of vigorous effort is created in that context, and it becomes possible to evade responsibility in deciding those matters which are really important. Various forms of intervention of central authorities into day-to-day activity of associations hinders them from performing effectively. To be specific, the issuing of numerous instructions and orders that are quickly out of date and are not adjusted quickly enough to the changing situation literally ties the hands of the executives of associations and enterprises.

Formation of bodies for management of groups of interrelated or homogeneous sectors of the economy and intersector complexes is to play an important role in improving the performance of central management units. The major portion of the functions of day-to-day management is at the same time being delegated directly to enterprises and associations.

There is still a real need to draft and carry out as speedily as possible measures making it possible to determinedly broaden the limits of economic independence of production associations and enterprises--the basic units of the economy. Consistent with the resolution of the congress, they are to be given greater motivation and responsibility for achievement of the highest final results on the basis of true cost accounting (khozraschet), the principle of pay-as-you-go and self-financing, and for establishing a direct relationship between the level of income of collectives and the effectiveness of their performance.

Decisions of immense importance have already been taken to expand the independence of agricultural enterprises--kolkhozes and sovkhozes. Firm plans, which are not subject to change, have been adopted for their sales to the state over the 5-year period.

Sovkhozes and kolkhozes have been granted the right to freely dispose of all their products produced over and above the plan. Conditions for remuneration and material incentives of workers in the agroindustrial sector, including key personnel of organizations, have been changed. Order has been put into the system for distribution of material resources.

Development of the new economic mechanism for light industry is being brought to its conclusion. It calls for renouncing evaluation of performance on the basis of the notorious "gross output," for sharply limiting the number of planning targets set from above, for shaping plans on the basis of contracts with organizations in the trade sector, which in turn are responsible for the correspondence between their orders and public demand. The labor force of light industry (and the trade sector) will have a substantially greater material motivation to improve quality and broaden the assortment of products, to give good service to consumers, to study demand and to respond to it astutely.

The improvement of centralized planned management of the economy and expansion of the independence and creative initiative of enterprises and associations--these are two directions of the effort that touch upon interrelated levels of

the system of management. They help to boost our economy, but they will yield the greatest benefit if they come together through a common interest in overall success.

The 27th CPSU Congress referred to a sharp strengthening of the effect of economic methods of management at all levels of the economy as the second main direction in the effort to bring the forms and methods of management and the conduct of economic activity into line with present-day requirements. This will require not only an improvement of planning, but also of the financial and credit mechanism and the pricing system, and the supply of materials and equipment will have to be restructured.

Strengthening the mechanism whereby finances and credit exert pressure on the economy presupposes, first of all, renunciation of the practice of redistribution of income, whereby the profit of certain enterprises, ministries, and regions is used to cover the losses of others. This kind of practice undermines cost accounting and gives rise to parasitism.

Use of the financial and credit system to regulate in detail the operation of enterprises must also be given up. At the same time there needs to be a radical change in the maintenance, organization, and procedures of financial credit authorities. Their most important task will now be economic stimulation and a strengthening of the circulation of money and cost accounting. The time seems to have come to change the practice of collecting the turnover tax, payments from profit and other budget revenues. The size of the payments and the payment procedure must be such as to increase the motivation to reduce production costs, to increase product quality, and to speed up product sales.

Improvement of the price setting system should make prices an active instrument of economic and social policy. The price system needs to be revamped in a planned way in order to make cost accounting more effective and to promote the tasks in increasing the well-being of the people. Prices must become more flexible. Plans call for broader use of ceiling prices and negotiated prices. The price level should be linked both to production costs and to the performance characteristics of goods and services, to the efficiency of products, and to the degree of balance between the output of the product in question and society's needs and demand for it.

The restructuring of the system with a supply of materials and equipment must transform it into a flexible economic mechanism that promotes the smooth and steady operation of the entire economy. The task is to actively promote the establishment of direct long-term contract relations between producer enterprises and consumer enterprises, to strengthen delivery discipline, and to develop the wholesale trade in the means of production.

The third direction in development of the management system is to improve its organization.

The steps to form bodies for management of groups of interrelated sectors, to revise master charts for management of sectors, to abolish intermediate levels of management which have not justified themselves, to transfer production

associations to the direct subordination of ministries, and to create intersector scientific-technical complexes are an expression of this line of the party.

The new forms and structures of production associations will play a leading role in improving the organization of management. In many cases the process of their development has not been effective enough, since the level of economic independence increased only slightly. The set of norms and methods necessary to create the associations had not been prepared. As a rule they were formed within the framework of existing departments and regional units, which quite often went against technological, economic, and social advisability.

One result of this was that many production and scientific-production associations ended up being very small. For instance, the average size of the labor force of NPO's in Mingazprom and Minudobreniy does not exceed 400 persons. The associations in Minenergomash, Minudobreniy, Mintyazhmash, Minkhimmash, and Minstroydormash have no more than two production units on the average. Quite often production associations have a scant scientific potential, while scientific-production associations have an inadequate production capability.

The size and structure of production associations in many sectors must be reassessed as a function of the specific conditions of their activity on an intersector and if necessary interregional basis. This in turn makes it a necessity to increase the diversity of forms of the production association and of the basic units of the economy in accordance with their specialization, service areas, and size. It is still an important task to determine the optimum relationship among large, medium-sized, and small enterprises. It would seem that this relationship cannot be identical from one sector or region to another, but it always presupposes a high level of scientific-technical development.

The fourth direction of the effort defined by the congress also has fundamental importance. The task was set of achieving the optimum combination of sectoral and regional management of the economy, combined economic and social development of republics and regions, further broadening of the rights of republic and local authorities, above all in the management of construction, intersector production operations, and the social and production infrastructure.

The policy report of the CPSU Central Committee to the Congress emphasized that local government authorities and administrations will bear responsibility for all aspects of life within their jurisdiction. Housing and education, health care and volume consumer goods, the trade sector and service sphere, public transportation and natural conservation—all these must be a matter of their main concern. The reason regional authorities have not been effective enough in their performance is that quite often they do not show a sufficiently businesslike attitude or enough initiative, and they do not make full use of their authority. At present the capabilities of these bodies are limited by the excessive centralization concerning matters which ought to be dealt with locally, not at the center.

The party congress has acknowledged the necessity to strengthen the independence and activity of local soviets. They must be transformed into full and responsible masters in all things that have to do with satisfying the everyday requirements of the population, in the use of local resources, in coordinating and monitoring the activity of all enterprises and organizations (including those under higher subordination) with respect to serving the public. Provision has been made to give local authorities greater interest in the performance of enterprises.

Effective functioning of the economic mechanism cannot be counted on unless the workers participate actively and creatively in drafting and carrying out economic and social plans and in deciding all the questions in the life of enterprises, unless management is democratized.

A set of interrelated measures has been envisaged for the comprehensive democratization of management of the economy. The reference is to enhancing the role of soviets at all levels, to fuller enforcement of the USSR Law on Work Collectives, new forms of worker participation in management (for example, the creation of councils of work collectives) and of improving existing forms of that participation (election of managers beginning with the lowest level and then at the middle level). There is also a need to see that there is greater monitoring from below, that economic authorities are accountable and open in their work, and that public organizations play a larger role.

These are the main directions of the revamping of the economic mechanism. This effort is already being actively made in accordance with the decisions of the 27th CPSU Congress. The lessons of the past speak of a need for purposiveness and determination in practical actions. Once the transformations have begun, we must not stop with halfway measures.

V.P. Mozhin--On Restructuring Management of the Economy

The thorough revamping of the system for management of the economy and methods of conducting economic activity is a task of first importance and at the same time one that is extremely complicated. Attempts to perform it in the past with separate half-measures, as is well known, were not successful. The lag of management forms behind the level of development of the productive forces, which had grown to an immense degree, and behind the growing multiplicity of the needs of society were the main cause of the adverse trends and of certain disturbances in the economy that occurred in the seventies. In drafting the program for restructuring management, we must make full use of the advantages of the socialist system with its planning in view of the fact that these advantages are not realized automatically. There is a need for constant renewal of the forms and methods of economic management so as to take into account the operation of objective economic laws and changes in production relations, the level of education, social experience, and the economic interests of the main body of the workers. Economic management is in need of constant improvement. This is a natural process resulting from the dynamic nature of production itself. But today the entire course of socioeconomic development has brought us into a situation where we have to carry out a large-scale radical reform of management of the economy calculated over a number of years.

The reform must result in the following:

- i. orientation of production toward meeting the needs of society and the priority of the consumer in his relations with the producer;
- ii. conversion of the economy to a strategy of intensive development, effective and timely revamping of the structure of the economy in accordance with the needs of scientific-technical progress;
- iii. a strongly operating motivation of production collectives to increase output, to raise product quality to lower costs, and to make active use of technical innovations;
- iv. the conditions for economic managers and all the workers to show broad initiative in dealing with production problems.

The fundamental directions in the revamping of management, which have been defined in the Policy Report of the CPSU Central Committee to the 27th Party Congress, contain in essence the conception of the new economic mechanism in its integral form. The revamping is to be done in an integrated way, is to embrace both the organizational structure of management and planning and also economic levers and incentives in their inseparable relation to one another. Emphasis will on the one hand be placed on a substantial improvement of the economic independence of the basic unit--the production association and enterprise, on more intensive use of economic methods of management, on introduction of consistent and full cost accounting, and on a broadening of democratic principles in management. Meanwhile, on the other hand, provision is made for a substantial increase in the effectiveness of centralized planning and management, for concentrating the center's efforts on performance of strategic tasks, on carrying out a more vigorous structural policy, on improving the internal consistency of the national economy, and on harmonious development of all the republics in the unified national economic complex.

Planning is the heart of management of the economy. But it does not, of course, follow from this that each and every thing to the last little screw has to be determined by authority "from above." This is even impossible as a practical matter, since the national economy produces more than 24 million designations of different products. The main thing in the activity of centralized planning and other economic bodies is to devise a scientifically sound structural policy that is based on the advances of technical progress, to guarantee optimal proportions and balance with respect to the most important national economic parameters of development, and, equally important, to create the economic conditions and effective incentives for carrying out the planning decisions. This means that the 5-year plan must contain not only the outright planning targets assigned to individual branches, but also and inseparably bound up with those targets the conditions for financing, for credit financing, prices, and other economic norms; guided by these enterprises and associations would be able to independently work out production plans and conclude contracts on product deliveries.

The contracts must contain the detailed specification of the products to be produced for the entire immense nomenclature, both with respect to volume and also with respect to quality characteristics. The delivery contract and economic penalties for its nonperformance represent a real method of subordinating the producer to the consumer and in the final analysis subordinating production to social consumers.

We would like to emphasize that centralized management cannot be reduced to the one-time or periodical drafting of a plan and economic norms. The process of social reproduction is uninterrupted, and consequently current management of that process must also be uninterrupted in order to constantly support the internal consistency of the economy in the course of plan fulfillment. Here again we frequently encounter problems which require interdepartmental coordination.

The bodies of management in the intersector complexes, whose formation has already begun and which will possess the necessary powers, would specifically be called upon to guarantee rapid and straightforward fulfillment of that task.

The decisions of the congress raise the question of revamping not only planning, but also the other functional systems of economic management of the national economy--finances and credit, the supply of materials and equipment, and the setting of prices.

The pressure exerted by the finance-and-credit system toward higher economic efficiency has recently turned out to be reduced. Extensive use of credit for the constant and nonrepayable financing of costs and even of losses has reduced the effectiveness of the entire arsenal of economic levers and incentives and of cost accounting. It is an erroneous and harmful idea that supplying additional financing and credit can correct the mistakes of production.

Building a pattern of responsible and optimum use of money resources and consequently of physical resources in the national economy and in its every link is an urgent requirement. The physical targets contained in national economic plans must be supplemented, reconciled, and verified by targets for the volume and speed of movement of money resources.

The question of revamping the supply of materials and equipment is a crucial one. Plans call for solving it by strengthening direct long-term relations among enterprises on the basis of contracts and by a gradual transition to wholesale trade in the means of production. This will make it possible to substantially improve industrial cooperation among enterprises in different sectors, including "horizontal" cooperation, and it will help to overcome departmental separateness. There will also be greater motivation of enterprises to realize money income, since there will be broader opportunities to achieve this.

In the final analysis the entire effort to improve planning and to use centralized methods of economic pressure on production and to revamp organizational structures must be aimed at conditions that would stimulate in every way the basic unit in the economic system--the enterprise and association--to

use resources intensively, to increase efficiency, and to better satisfy the needs of society. The main line has been plotted here--it is expanding the independence and increasing the responsibility of enterprises and associations for the results of economic activity.

The economic experiment which has been conducted in a number of branches of industry since 1984 has made a definite contribution to performance of this task. But as we objectively assess its results, we cannot but say that the economic mechanism set into operation is still characterized by an inner incompatibility; both the old elements and the new ones are present in it. The idea is to follow the road of further expansion of the independence and further enhancement of the responsibility of enterprises. It seems that the performance of this task should be undertaken along two interrelated lines. On the one hand by tuning up new methods of management in the upper levels of management; on the other by granting broader rights directly to enterprises in the planning and disposition of resources and the results obtained, in setting prices, and in supply, on the basis of the active participation of the collectives of enterprises in dealing with production problems, economic problems, and problems of social welfare.

It is necessary, of course, to improve the use of economic norms. Their use is so far not very strongly connected to the summary economic results of the business performance of enterprises--the net output and profit created in them, and the quotas and the standards are derived from the approved plan. It should obviously be the other way about--the plan of the enterprise must be drawn up on the basis of the allowances and the standards.

Knowing in advance the economic conditions of the future period--prices, rates of deductions from profit to the budget and other charges, as well as assignments for product deliveries, the enterprise will be able to draft and approve the plan of its development creatively and independently, without being afraid to reveal the potential that it has. Economic conditions must be ensured by affording enterprises the possibility of making outlays for reconstruction, for retooling, and for expansion on the basis of their own accumulation after the example of the Volga Motor Vehicle Plant and the Sumy NPO.

In our view the facts afford sufficiently convincing evidence that the further development of cost accounting is bound up under present conditions with the dissemination of the principles of the collective contract at enterprises. Contract brigades and shops, as is well known, guarantee a growth of production and high quality of the product almost without additional costs. But the contract only at the lowest level, if the previous procedure is retained at the level of enterprises and the association, will not make it possible to bring about responsible and economically sound relations in all units of the system and will not afford the necessary benefit. That is why it is advisable to take up the question of extending the principles of the contract to the activity of enterprises in a number of sectors of the economy.

Broadening the independence of enterprises and granting them the real right to choose business decisions have yet another essential aspect. Only on that basis is it possible to really make use of the human factor, to develop

democratic principles in management. The opportunity to display business initiative is the principal condition for the creative enrichment of work, including managerial work, and for a substantial rise of its productivity on that basis. In the effort to revamp the management of the economy it is very important to determine the sequence and procedure for carrying out all the measures that have been outlined. The key factor would seem to be drafting and adopting the normative document, which would have the force of law and which would define the rights and responsibility of the basic unit in the economic system--the enterprise and association. That document must reflect all changes in the domain of planning, financial-and-credit relations, supply, the setting of prices, and the constructive results of the experiments which have been conducted. Such a document must become the basis for "welding together" the functional systems for management of the economy and must serve as a definite juridical guarantee of enterprise independence. The principles set down in it would be taken into account when adjustments are made in the statute concerning the ministry and in the function of central economic authorities, and all the numerous instructions and methods regulating enterprise activity would be reviewed.

Sumy, Frunze Experiments Detailed

Moscow TRUD in Russian 17 May 86 p 2

[Article by P. Bunich, corresponding member of the USSR Academy of Sciences, Moscow: "Ways of Restructuring the Economy"]

[Text] It was noted at the 27th CPSU Congress that the new tasks in the economy cannot be performed without a thorough revamping of the economic mechanism and a radical reform of management.

The first step in this direction has already been taken. A third of industrial enterprises, all communications enterprises, a portion of transportation organizations, and a number of others are already operating under the new conditions for conducting economic activity.

In a socialist economy the quality of the plan and above all its realization have paramount importance. However, within the framework of the present economic mechanism the plans of many enterprises have been set too low for the volume of output, profit, payments into the budget, and the quality of products. And they have been set too high for costs: fixed capital, labor intensiveness, and materials intensiveness, working capital, and investments. What is the reason? The performance of collectives is evaluated quite frequently not on the basis of the actual size of the contribution to the economy, but on the basis of fulfillment of planning targets--without fully taking into account the level of their efficiency. It is those targets which sometimes afford the possibility of "legalization" of low results and high costs. As they say, once it gets into the plan, it becomes the law of the land. That is how even enterprises operating at a planned loss have become "legitimate."

If under pressure "from above" plans are raised to an acceptable level of strenuousness, then retaining the old mechanism for the conduct of economic

activity makes it difficult to fulfill them. Managers ask for adjustments, they look for "objective" causes so that they can give less and take more. They do not earn as much for themselves as they "shake it down" from higher-level units which after having approved their plan are the ones who evaluate its fulfillment. Since a fight is now being waged against adjustments, other enterprise managers have found a different method: they put pressure on consumers so as to postpone the dates when they obtain deliveries.

In accordance with the new conditions for the conduct of economic activity, the growth of the wage fund must be earned by virtue of the growth of normative net output; the growth of material incentive funds must be earned by virtue of the growth of profit or reduction of production cost. That is why the growth of income is already the result of labor, not of "wangling" an advantageous allowance. This approach weakens the "interest" in low plans and in part stimulates the adoption of strenuous targets. After all, only in that case will the growth of production and the level of efficiency and income turn out to be higher. Thus the new conditions also tighten the sinews of the plan and enhance its progressive impact on the economy.

The approach based on growth has its own organically inherent contradictions. First of all, it places in a better position those enterprises which have more untapped potential. Second, the base wage fund and the base economic incentive fund are essentially guaranteed and comprise 95-97 percent of the final amount of the incentive. Third, not all collectives can orient themselves toward a growth of production. For example, this can hardly be done by enterprises extracting natural resources.

To a considerable extent these contradictions have been overcome by the experiment conducted by the Sumy Machinebuilding NPO imeni M.V. Frunze and AvtoVAZ. Its essence lay in two new positions. The first: incentive funds at the previous year's level are not guaranteed. They have to be earned all over again each time. Everything is decided by the total amount of profit, not by its growth. The second position: in Frunze there was a more extensive and at VAZ a less extensive conversion to self-financing.

Whereas previously the association largely transferred its profit to the state and in turn received from the state the bulk of its investments, now the people in Frunze cover all expenditures for retooling and reconstruction and expansion of enterprises from a portion of their profit (credits are not included) and from the depreciation fund. In the 11th Five-Year Plan the people in Sumy received 42 percent of resources for development of their production from the budget and from the accumulation of the sector; during the 11th Five-Year Plan all the association's resources for renewal had to be earned on their own. That is in fact the essence of the present form of self-financing.

Thanks to this self-financing the profit of the collective does not depend on knowing how to get money from the pocket of the state, but on the results of its work. This procedure motivates enterprises to reduce production costs and operates as an anticost mechanism. Let us look at the results of the experiment for last year taking the Sumy NPO as an example. A relatively closed cost-accounting cycle has a better impact on investments than any

recommendations. Instead of a desire for new construction, a desire is engendered for a less impressive, but more efficient retooling and reconstruction of production. The NPO committed nearly 73 percent of the total volume of capital investment to those purposes.

There has been a substantial increase in the relative share of machine tools with numeric control and machining centers. Noticeably more progressive production processes have been introduced than before. The share of the labor force engaged at manual labor has decreased. One-fourth of all the workers have improved their qualifications.

The enterprises are now required to prevent the growth rates of the average wage from exceeding that of labor productivity. For every percentage point of growth of labor productivity in Frunze, a growth of wages by 0.52 percent is envisaged. The actual figure was 0.45 percent. The average monthly wage of production personnel increased 6 percent.

A new situation has come about concerning the conclusion of contracts. The Sumy people are not running from them, but pursuing them. They perform contract obligations on time. Last year the Frunze people delayed delivery dates on only 1.3 percent of their contracts (as against 2.7 percent in 1984). At present orders are being fulfilled at a rate of 100 percent. Only under those conditions do the incentive funds and funds for development of production--the basis of technical progress, efficient business operation, and future income--turn out to be large enough.

Profitability calculated relative to production cost has risen almost 25 percent. The results are good.

Still more important is an analysis of the association's plan for the 12th Five-Year Plan. Although the reference figures outlined a growth of production and labor productivity of almost 1.6-fold, the collective proposed increasing the volume of marketed output by another 5.8 percent. The relative share of updated products was raised from 39 percent to 56 percent. The amount of equipment serviced on the consumer's premises will increase 3-4-fold: installation work, startup work, adjustment, and repairs.

The time periods for designing and creating new equipment and putting it into production would be reduced to less than half by building their own full-scale testing stands, by eliminating the stage of the detail design and going directly to the contractor design. Profit will increase 2.7-fold, and profitability will rise to 34.6 percent. The ratio of the material incentive fund to the wage fund will increase from 17.2 to 22 percent, and transfers to the budget will increase 4.5-fold.

The system of self-financing is clear to everyone: it arouses general support from the director to the worker. Even now enterprises providing consumer services to the public are operating according to this system. Preparations are now being prepared for the transition to this system of all enterprises of Minkhimash and 30 enterprises of other branches of industry. Beginning in 1987 the entire light industry will by and large make the transition to this

kind of system. The experience gained and the broad scale of the experiment will be taken into account. This is in line with the logic of introducing the new conditions for the conduct of economic activity and with the course of the party congress directed toward affording enterprises the opportunities--after the model of VAZ and the Sumy NPO--of earning on their own the resources necessary for expansion and the technical updating of production.

But even after the Sumy experiment is copied on a large scale, many key problems will remain, and unless they are solved, even the steps that have been taken will not yield a full return. It is a question of assaulting a far higher peak. Specifically of direct linkage of the entire size of the wage fund, not only its growth, to the income which enterprises realize from the sale of their products. In this case the self-financing of remuneration, which is often a formality, would become authentic. When this is combined with the self-financing of production costs and incentive funds, the model of self-financing is complete. The outlined conversion of the BSSR Ministry of Light Industry to normative determination of the wage fund from money proceeds after deduction of material costs and the charge on assets has great importance. This is the first detachment which will begin the advance in the new direction. At the same time "ceilings" on personal incomes need to be removed, since unjustified restrictions on the payment of rewards are turned into limitations on the strenuousness of plans and actual results and into an excessive number of personnel. Better use needs to be made of the flexible form of the tax to achieve a certain evening out of extremes of income.

The stimulation of good performance is inseparable from economic penalties for poor performance. If the first half of this formula operates, but operation of the second half is slack, then the mobilizing force of the incentives is reduced by the leveling payment for the mediocre and even bad results. Reimbursement of losses by the offenders is a rarity; demotion is an almost unique occurrence. There are many reasons for this: the "shortage" of experienced personnel, to some extent the leniency and inertia of legislation, and others. This cannot continue. Whoever performs poorly must also earn little.

It is a most important condition of self-financing to grant collectives broad rights in planning and in the practical organization of plan fulfillment. If collectives receive instructions "from above," then they must be embodied not only by means of administrative methods, but also economic methods. Then what is advantageous to society also becomes advantageous to the collectives. This kind of centralization does not detract in the least from the responsibility of enterprises for everything that they do.

It would seem that even in the context of self-financing it is important to preserve for the highest authorities of the economy the examination and approval of plans for the construction of major projects which are over and above the limits and which alter the proportions of the national economy. It is important only to substantially raise the limits which have been fixed for that purpose. The execution of centralized decisions also is served by an economic lever such as state credit policy. Budget financing is preserved for fundamentally new scientific-development projects and the creation of new branches and enterprises. The measure of centralization in the industry of Group A must, of course, be far greater than for Group B.

At present we still have an "overproduction" of indicators whose assignment is binding. Even in Frunze they have been assigned 230 indicators, including intermediate ones: production of welded fabrications, lumber, stampings, and production gear. They are assigned "from above" 44 indicators for reduction of standard rates of consumption of energy resources and materials, even though the supply allocations for them have already been cut. The plan for science and technology contains 33 indicators, the plan for new technology 7, and so on. What are you going to do?

It was noted at the 27th party congress: "Step by step there should be a broadening of the range of problems on which the decisions of the work collective are final." The effectiveness of the levers introduced will depend at first on taking into account the unequal conditions of enterprises at the start. This makes it necessary that fixed payments and subsidies be introduced temporarily for certain enterprises. These fixed payments may be joined with other types of payments to the credit of the ministry, as they intend to do in USSR Minlegprom beginning in 1987. But every year the subsidies must be gradually reduced until they are completely eliminated.

The reform of the economic mechanism is not merely a reconstruction of the basic unit. It is an adaptation of the central planning authorities and of the vertical economic structure to it. It is a revamping of the financial system. It is important to narrow the sphere of budget financing and of above-plan financing within the branch, which quite often turns the income of certain collectives, ministries, and entire regions into the expenditures of others, which intensifies social parasitism. There is doubt about the procedure for collecting the turnover tax up to the level of actual product sales. When there are difficulties in selling products, some of the tax received still goes to cover mark downs. If even the mark down does not help, then the goods are written off.... Once again at the expense of the budget. The result is that society gains nothing. And in the final analysis it even loses, since the state assumes the economic liability for goods that do not sell instead of that being placed on enterprises and the trade sector. It is gratifying that the first steps have already been taken in the necessary direction. Beginning in 1987 losses from reduction of prices and mark down of goods in light industry will be covered from the reserves of enterprises and ministry-level funds for adjustment of prices, which are formed from profit and the price supplements received by collectives.

The new economic mechanism requires a new approach to the setting of prices; otherwise it will not be possible to strengthen the role of commodity-money relations. If prices are still based on cost, as they have in the past, then self-financing may prove to be artificial. More funds will go to those who overexpend resources, and the share of profit in the price will be hiked up. If the price begins to merely reimburse those costs which are justified by the useful benefit of the goods that have been sold (and purchased!), then the producers of the best and more economical products will derive the advantage.

So, the thorough revamping of the economic mechanism is a complicated matter. But also an urgent one, since the new problems in the economy cannot be solved without it.

The Ownership Aspect

Moscow EKONOMICHESKAYA GAZETA in Russian No 29, Jul 86 pp 6-7

[Article by S. Shatalin, corresponding member of the USSR Academy of Sciences, and Ye. Gaydar, candidate of economic sciences: "The Key Problems of the Reform"]

[Text] Radical reform of the entire system of economic management is expected to achieve a major improvement of the economic forms taken by socialist ownership and the shaping of a stewardly attitude toward social property. Social ownership, it was noted in the Policy Report of the Central Committee to the 27th Party Congress, has a rich content, incorporates a ramified system of relations among people, collectives, branches, and regions of the country in use of the resources and results of production, an entire range of economic interests. This complicated set of relationships needs to be combined in a particular way and constantly regulated.

The task is to fully discover the advantages of an economic system based on socialist public ownership, to increase the motivation of the workers to achieve better utilization and reproduction of the wealth of society, which will provide strong thrusts toward acceleration of the country's socioeconomic development. It is consequently a question of a further deepening of socialist self-management in the economy and of making the workers authentic masters of socialist production.

The economic forms taken by socialist state ownership--in our view this is where the key problems lie in the radical reform of economic management. Answers first have to be found for at least the following fundamental questions:

- i. how to preclude the possibility of the occurrence of a shortage of means of production and consumer goods, to safeguard the dynamic balance of all the elements of reproduction;
- ii. how to increase the consumer's role in economic life, to achieve real subordination of production enterprises to the needs of consumer enterprises and the public;
- iii. what methods a planned economy should use in reacting flexibly and responsively to changes in the needs of the economy and the public;
- iv. how to create for participants in production strong motivational mechanisms that guarantee their interest in achieving the highest level of efficiency in productive activity.

It is through the prism of solving these problems that the basic content of socialist state ownership and the principal forms of its economic manifestation are revealed. Socialist state ownership is the economic basis of socialism; it directly subordinates the development of production to satisfaction of the growing and increasingly complicated needs of the public, to solving fundamental social problems; it guarantees planned proportional development in

the economy. But these advantages of socialist state ownership of the means of production are fully realized only if the production workers are placed in economic conditions which motivate them to behave like true masters of production.

The Road to a State of Balance

First of all, in our opinion, we must abandon the idea that took shape in the context of the extensive economy that centralized assignment of an extremely broad list of products is the sole means whereby society can manage the basic proportions in reproduction. Quite often people see this as virtually the only method appropriate to socialism that makes it possible to achieve satisfaction of the needs of the economy and the public. Such ideas have actually become a stereotype of economic thought.

There is no doubt that determination of proportions in the national economy is one of the principal tasks of centralized state planning. Achieving this requires centralized planning of the products list for the most important products. The level of coverage of production by such targets will vary from sector to sector. But in a socialist society there are also other means and methods of achieving a balanced state of production. For example, price policy, taxation of income derived from resources used, subsidies, and credit policy. If skillful use is made of these means and methods, they become a flexible and effective set of instruments for planned management capable of guaranteeing execution of centralized decisions in the context of intensive development.

A search has to be made for new relationships between targets directly assigned and economic standards, and the independence of enterprises in conducting their economic activity needs to be broadened.

This was after all stated at the June Plenum of the CPSU Central Committee, where it was emphasized that the bulk of the responsibility for dealing with practical matters should be taken on by work collectives of enterprises and associations. But creation of the necessary economic, legal, and social conditions for successful performance, for carrying on scientific-technical progress, would be the direct responsibility of central management authorities.

In our view it would be advisable to substantially enhance the role of financial and credit authorities in making the structural decisions that determine the level of balance. For instance, it is important to shut off the channels for automatically extending credit to finance what amounts to the manufacturing of products not in demand and advance transfers of turnover tax up to the actual level of sales, and also to make enterprises more strictly responsible for preserving their own working capital and for observing payment discipline. The fundamental principle resounded at the June Plenum of the CPSU Central Committee that with the transition to the new methods of conducting economic activity the role of the bank should be enhanced as an exceedingly important entity in management of the economy.

The essence of the task lies in reorienting the mechanism of centralized management of current activity from the distribution of scarce physical resources to the building and redistribution of financial-and-credit resources and the monitoring of aggregate demand. But this makes it a necessity to greatly expand the rights of enterprises in use of the money resources left to their disposition and in shaping their production program and the system of business relations.

But it would be an impermissible oversimplification to give the impression that effective monitoring of aggregate demand and achievement of a state of balance at the level of the national economy by definition eliminate the idea of direct management of distribution of physical resources. There are sectors in which direct regulation of production and distribution is either the only possible method or the one that is most effective. They include, for example, many infrastructural segments of the economy, branches producing a product that is especially important. The use of mandatory targets and limits may also be required in other sectors of the economy, especially on behalf of distribution of products whose shortage is related to temporary structural disproportions in production capacities.

In the system of management which is to be built in the process of the reform mandatory targets and limits will in our opinion cease to perform the function of regulating the entire totality of interrelationships in reproduction.

Such targets would become a lever of management used for tasks which cannot be effectively performed by the methods of assigning standards and allowances. They will be confined, then, to forms which do not violate the cost-accounting [khozraschet] interests of enterprises, guaranteeing the responsibility of higher-level authorities to support the targets with resources and the existence of demand for the output that is planned. After all, the question is not whether enterprises will be assigned 5 or 15 mandatory targets, but rather that there must not be mandatory targets that presuppose a one-sided responsibility of enterprises to the center. Economic responsibility also means responsibility on the part of management authorities.

Development of wholesale trade and means of production has fundamental importance to achieving more efficient economic performance. Here again qualitatively new approaches are required. First of all, conditions need to be shaped that guarantee reconciliation of the interests of producers and consumers of a product. The task is to build the mechanism of a regulated socialist market on which enterprises, within the limits of constraints established by the state (determination of the production configuration, supply of priority consumers before others), independently shape the system of business relations in which the sum total of obligations becomes the basis of the enterprise's production plan. A most important prerequisite for the normal functioning of the regulated market is improvement of the system for setting prices. A reform of wholesale prices seems indispensable so that by the beginning of the next 5-year planning period there is in place a reliable price base for introducing the economic mechanism appropriate to the present socioeconomic situation.

The point is not for prices to passively accommodate the proportions that take shape on the market. The centralized setting of prices of the principal products, the setting forth of mandatory rules for determining production costs, and the exposure of unjustified profit are necessary components of market regulation. It is important that prices be supplemented by the appropriate system of financial levers, by formation of reserves of certain products which can be maneuvered quickly, by control of the level of inventories, by the use of credit to stimulate the production of scarce products, and by other measures.

The Stewardly Attitude Toward Resources

The success of the reform of management will depend to a decisive degree on whether it becomes possible to achieve effective motivational mechanisms for stewardly utilization of production resources. Unless there is a clear linkage between resources allocated to the disposition of enterprises and the results of their business performance, it will not be possible to solve this problem. An important step forward has been taken in this regard in the context of the experiments conducted in the Sumy NPO and AvtoVAZ.

It would seem that the principal condition for the effectiveness of the cost-accounting incentives for enterprises is the guarantee that the resources and advantages from maximum realization of internal production potential will not be taken away from them. This principle is realized with the orientation toward uniform economic standards and also tax rates regulating the distribution of the gross income of enterprises. Since the conditions of their functioning are specific, in many cases application of individual levers, fixed charges, and subsidies will turn out to be an objective necessity. But such methods must not come into contradiction with the general and universal system of distribution of gross income; it is important that they be clearly linked to national economic and socioeconomic tasks.

The orientation toward uniform economic standards also presupposes a substantial enhancement of economic accountability for ineffective economic performance. The article entitled "Breaking the Stereotype of the Equality Principle" (EKONOMICHESKAYA GAZETA, No 22) has rightly noted that its forms could be differentiated in connection with unsatisfactory performance. The irreversibility of economic consequences adverse for the management of enterprises (and to a certain degree for the collectives as well) does not signify, however, that enterprises which are not creditworthy will automatically be liquidated. It is possible, for example, that enterprises will specialize in something else, that a portion of the resources will be transferred to production entities that are operating more efficiently, and there may be various kinds of mergers with enterprises performing effectively.

Incentive for Highly Efficient Work

The transition to the practice whereby all enterprises conduct their economic activity on the principles of full cost accounting raises the issue in all its sharpness of the socially acceptable limits of differentiation of worker income. The most important task at present is to combat leveling, to intensify

differentiation in remuneration so as to take into account the contribution which collectives and workers make by their work to the end results. But this does not mean that we can close our eyes to the existence of objective social limits of the differentiation of income.

Exceeding those limits could reduce the level of work discipline in production units which have found themselves in worse conditions, could cause social tension, and could engender inflationary tendencies. In our view tax reform and the transition to progressive taxation of the final average per capita family income must in the future play a substantial role in solving these problems. But in the very near future it is advisable to supplement the system of distribution with payments that restrict socially unacceptable levels of enterprise income.

In our opinion it is not possible to solve the problem of building a powerful motivational mechanism that stimulates highly productive work solely on the basis of effective systems of financial incentives on the principle of "remuneration commensurate to work effort." The problem arises of the forms whereby workers become part of social production. In solving this problem we evidently need to start from the principle that socialism is not a welfare society in which full employment is automatically guaranteed thanks to the creation of surplus jobs. Socialism does guarantee full employment, but a full employment that is socially and economically efficient and which presupposes economic motivation to preserve one's job, which will be expressed in a high level of performance. It is advisable to grant enterprises and associations greater rights in the dismissal of superfluous personnel and to relieve managers of the need to find other jobs for those laid off.

The experience of the socialist countries has shown convincingly that even a substantial reduction of the number of mandatory targets cannot guarantee a substantial expansion of the economic independence of enterprises unless it is combined with the accountability of enterprise management not only to higher-level authorities, but also to its own collective, to its leading trading partners, and to banking and financial institutions. This also presupposes development of democracy within the workplace.

Improvement of the forms which socialist ownership takes at the level of the enterprise and of the methods of real worker participation in management cannot be achieved with uncomplicated solutions. What is needed here is flexibility in acknowledging the social significance and scale of production and real opportunities for involvement of the workers in dealing with questions at various levels of management and monitoring the performance of management bodies.

The Problems of Investment Resources

The possibility of obtaining resources without compensation, when as a practical matter no one is responsible for their economically efficient utilization, should be listed among the main causes determining the insufficient efficiency of production. We are referring above all to centralized state capital investments. There is no economic entity in the conduct of business that would

be motivated as a true owner to achieve the most efficient centralized distribution of resources. In our view this is one of the fundamental problems in increasing the effective utilization of socialist social ownership.

The necessary reconciliation of social, collective, and personal economic interests and achievement of social priority in use of resources cannot be achieved without setting up objectively operating mechanisms so that the actions taken by managers are truly those of caretakers. Unless this problem is solved, there can be no answer to the question of how the principles of full cost accounting and self-financing can be implemented in a real economy?

The present situation, in which the investment resources which enterprises have at their disposition are considerably smaller than is necessary for simple reproduction, gives rise to an attitude of dependency and puts limits on the possibility of collectives displaying initiative. The share of such resources must be substantially increased; the method of normative distribution of gross income, for example, might well be used for this purpose.

If an enterprise that is performing successfully in the context of normative distribution of gross income builds up financial resources sufficient not only for simple reproduction, retooling, and reconstruction, but even for expansion of production of products which are in demand, there is no basis whatsoever for restricting its investment activity. This question was raised in the article entitled "The Mechanism of Distribution and Production Efficiency" (ECONOMICHESKAYA GAZETA, No 24). Even the construction of new enterprises must not be a monopoly of the state. Here it is possible to have flexible credit mechanisms, "economic auctions" ["ekonomicheskiye togi"], and competitions, and the resources of a number of enterprises could be pooled. At the same time attempts to place on enterprises the responsibility for cost-accounting financing of the entire process of expanded reproduction on the basis of the mechanism of normative distribution of profit and the proposal that the bulk of resources for investment in the production sphere be placed at the disposition of enterprises could in our view result in serious contradictions and hamper the redistribution of investment resources.

That is why high requirements must be imposed on the efficiency of budget financing and the credit financing of enterprises. It is advisable to allocate investment resources to existing enterprises as a rule on a repayable basis, using the mechanism of investment competitions, to differentiate interest rates appreciably so as to take into account the impact of capital investments made with resources from the center of the economy on enterprise income.

The most important directions for investment of centralized resources of the state would be one-of-a-kind projects of the production and social infrastructure and the economic development of new regions.

Openness to Scrutiny, Monitoring, and Appraisal

Expansion of the economic independence of enterprises and use of economic methods will not yield constructive results unless there is a very rapid increase in the effectiveness of centralized management. A definite contribution

to solving this problem could be made by authentically relieving the center of the economy of the burden of dealing with partial and current problems. But in our view that is not the main thing. It seems indispensable to greatly tighten the mechanism of political responsibility, social monitoring, and openness to scrutiny in the proceedings of management bodies.

It is an unavoidable condition for development of the mechanisms of social monitoring to achieve wide access to information concerning socioeconomic processes. The sphere of statistical information accessible to the public has in our opinion been unjustifiably restricted. In many cases these constraints and departmental control over information are used to cover up economic miscalculations and inefficient use of social resources.

A major overhaul of state appraisal by experts is a task whose time has also come. This has now become a part of the activity of economic planning entities, and, as experience has shown, it quite often comes under the influence of departmental interests and gives consideration to matters of secondary importance. For all practical purposes there is no expert appraisal of plans for economic and social development. It would be advisable to transfer state appraisal to the jurisdiction of the USSR Supreme Soviet, the supreme soviets of the union republics, and local authorities of Soviet power. In our view it is only on that basis that it would be possible to realistically enhance the role of soviet bodies in the distribution of social resources and in monitoring the effectiveness of their use.

The planning of socioeconomic development has still not been sufficiently oriented toward seeking out ways for the most efficient use of resources. Plans are drafted in a single version, which often does not have internal consistency and the possibility of choosing optimum solutions is precluded. This would seem to be the principal area of untapped potential for a major increase in the level of performance of planning and economic authorities and for transforming USSR Gosplan into the country's authentic scientific-economic command headquarters. This also requires a substantial rise in the level of professional competence of planning personnel and involving distinguished specialists and scientists in the drafting of plans on an acceptable basis.

Increasing the effectiveness of centralized management of the economy also depends on deciding the question of the role of sector and branch ministries. Experience gained during the period of their existence has convincingly shown that in a number of cases they have favored the occurrence of strong "monopoly impacts" in production, suppression of the interests of consumers, a strengthening of inflationary processes in the economy, and a manifest elevation of production criteria over the social and economic criteria. It can be said without exaggeration that such effects would seem to be "tearing apart" the relations of social ownership and are becoming a most important area for the display of departmental interests.

The task is now being advanced of turning the ministries into organs of the centralized state command headquarters for strategic development of sectors and branches, depriving them of functions specifically pertaining to reproduction of the economy. This is obviously the right problem, but the logic of

development of objective social and economic processes cannot be forgotten; those processes could bring it about that the ministries would recover the rights they have lost, will again begin to command enterprises, and will remain the holders of resources. These tendencies must be taken into account and effectively counteracted. In our opinion it would be worthwhile to discuss the question of leaving only general functional ministries and also ministries administering infrastructural sectors (for example, transportation, communications).

Radical reform of the system of economic management in the context of our large-scale economy is a task of unprecedented complexity. There is no doubt that a certain risk is involved in revamping the economic mechanism. But our country has already had occasion to introduce methods of economic activity not previously tried in world practice. In the situation that has come about, however, the maximum risk would be run if we were to refuse to carry out the transformations that have become necessary, if we were to delay them, if we were to attempt to substitute partial measures for radical solutions.

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CSO: 1820/179

ECONOMIC POLICY, ORGANIZATION AND MANAGEMENT

NEW CONCEPTS, RELATIONSHIPS NEEDED FOR ECONOMIC RESTRUCTURING

Economic Science

Moscow PRAVDA in Russian 11 Jul 86 p 3

[Article by A. Kolesnichenko: "Becoming a Support for Practical Life: Ways to Reorganize Economic Science"]

[Text] The reorganization of the economy and the economic mechanism is impossible without relying on science, according to the statement in the Political Report of the CPSU Central Committee to the 27th CPSU Congress. Special emphasis was made on the sharp increase in the role and responsibility of economic science at the current sharp turning point in the life of our society. Serious charges were made and a social mandate from the party to the economic scientists was formulated.

From the spirit and letter of the congress materials it evolves that many representatives of economic science are still far from finding the answers to the most burning questions of the day.

The 27th CPSU Congress issued the requirement to look in a new way at such major problems as the interaction of the productive forces and production relations, socialist ownership and economic forms of implementing it, commodity-monetary relations, the combination of centralism and the independence of economic organizations, and a number of other problems.

Thus, we are talking about the key, fundamental principles of economic theory, and about the theoretical principles of the further steps to reorganize our society. And the very posing of them attests to the fact that the party believes in the large potential capabilities of the political economics of socialism, and sees them. But in order to implement these capabilities it is necessary not to mark time, but to march boldly ahead, to interpret the new topics that are engendered by life, and to get rid of scholasticism, obsolete stereotypes, and dogmatism, on the one hand, and empiricism, narrow practicalism, and opportunism, on the other. Herein lies the chief condition for the rapid overcoming of the certain remoteness of economic science from the demands of life, and the transition from the reciprocal reproaches between

science and practical life to their close and efficient interaction. In this context it is important to assimilate well the lessons evolving from the rate of fulfillment of the resolutions of the CPSU Central Committee that pertain to the Institute of Economics, USSR Academy of Sciences, which were enacted twice during the past 15 years.

After each of the resolutions (the latter one, as is well known, was enacted slightly more than two years ago), there was no shortage of assurances from the economic scientists concerning their intention to take decisive steps to change the state of affairs not only at the Institute of Economics, but also in economic science in general. With the passage of time, however, it became obvious that many individuals had failed to take the party criticism as pertaining to them, but rather related it to others. We cannot allow attitudes such as this to predominate today also.

An analysis of the rate of fulfillment of the resolutions of the CPSU Central Committee indicates that the traditional work methods and methods of organizing work have not been yielding valid and rapid results. For example, a rather large number of efforts were undertaken during the past two years by the management and party bureau of the Institute of Economics to increase the activity rate in the scientific process, but what resulted from them? Largely speaking, nothing yet. Consequently, it is time to take a more attentive look at the existing arsenal of means and methods of organizing the work and of evaluating how effectively that arsenal is being used.

It is well known that the interrelationships between economic science and practical life have been, and continue to be, complicated ones. To a large degree, science itself is guilty of this. But the economic managers have also made their contribution. The inertia and stagnation in economic life which have been censured by the party, the striving by certain managers to avoid the resolution of problems, and bureaucratism and the concentration on local interests obviously failed to promote the flourishing of the social sciences. Many people needed their recommendations only for the purpose of creating the appearance of the "scientific substantiation" of the decisions being made. People listened to the scientists if their recommendations did not contradict the "other considerations."

There is also a need to improve the legal norms that regulate the interrelationships between science and practical life. Strange as it seems, at the present time the customers, essentially speaking, do not bear any responsibility for the inclusion of a particular topic in a plan on their instructions. Frequently those topics are proposed "just in case." For obvious reasons, science also liked this approach.

The improvement of the planning of scientific research is an important step toward bringing economic science closer to economic practice, because it is no secret that frequently the plans for scientific-research projects are oriented not toward social needs, but toward the interests of the collective that is executing the project. Hence the shallow topics, the duplication, and "dissertatability" of the research, and the complete indifference of the economic managers to that research.

The rate of results from the dialogue between science and practical life depends upon the proficiency level and professional solvency of its participants. Much is being said about the importance of the economic education of the commanders of production. But something that is no less important is the quality of the training of the scientific associates. There is a rather large number of problems here. And the first of them is the problem of young cadres. Unfortunately it must be stated that many graduates of economic institutions of higher learning and schools of economics (especially those who have received the diploma of political economist) are very remote from a specific knowledge of the real problems of economic life.

The attempt to turn young people around to face reality, to imbue in them a taste for analyzing reality, for working with concrete statistical material, is, of course, made at those places where the young people go after graduation from the institution of higher learning. But how much time and effort have to be expended to do this! In addition, it is by no means the case that people everywhere know how to do this, or want to. Is it surprising that, after a few years, abstract schemes and pedantic judgments begin to appear in the dissertations of the postgraduate students, and in the planned projects at the institutes?

The shortage of young skilled cadres is felt even in such scientific institutions as Institute of Economics, USSR Academy of Sciences. The question has been raised several times there about how and by what means one should attract talented young people. But that question has not yet been resolved. One of the ways to achieve professional growth (and this pertains not just to young people) could be, the institute feels, for the scientific workers to work a probationary period of time in planning and economic agencies. Simultaneously the institute would open its doors to the people from practical life who want to refresh their theoretical knowledge. It is an interesting idea, but will it be implemented? And if so, when?

Tremendous and still practically unused reserves lie, as has already been noted, in the sphere of organizing scientific research. Take, for example, such a question as specialization. It is theoretically known that the institution that is the country's leader in researching problems of political economics is Institute of Economics, USSR Academy of Sciences. But, practically speaking, in the 1960's that institute began losing, and at the present time has largely lost, its position as a generator of political-economic ideas, and the Marxist interpretation of the processes of economic development.

The institute has been working on a broad group of vitally important problems. But very frequently the approaches to them differ very little from those that are generally taken in the branch scientific institutions. For example, the institute's research on the problems of labor differs from the research in the branch scientific-research institute of labor only in that the latter research is based on a considerably richer data base.

A weak spot for the economists (and, incidentally, for social sciences as a whole) is the coordination of the research within the confines of the institute. It would seem to be obvious that all its subdivisions have been

created for the more complete encompassing of the subject matter. But in practice not all the subdivisions are being created "to deal with the problem," and the problems themselves are adjusted to fit the structural links that have already developed. As a result, the long-range scientific research is impeded, and the sectors and departments are frequently uncoordinated.

The party demands that the leading central economic institutes intensify the methodological guidance of the economic institutes at the republic academies, the higher educational system, and the branches and departments. But for the time being, even at the Institute of Economics itself, the associates who are engaged in applied research feel a sharp shortage of precise methodological principles from the theoreticians in political economics. And the latter, in turn, are fenced off from the invigorating air of practical life, from the analysis of the problems that actually arise in economics.

Recently, in a few places, including the Institute of Economics, temporary scientific collectives for comprehensive work on exploratory topics have begun to appear. The reports on their work have been good. Apparently this is one of those promising forms of organizing scientific efforts, the experience of which should be disseminated more boldly.

Considerable difficulties arise when several independent scientific collective undertake the research on one and the same topic. The system of coordinating the projects among the academy and departmental institutes, and between the central and republic-level ones, continues to be poorly set up. Frequently that system exists only formally. For almost 15 years there have been discussions about the legal formulation of the statute for the lead institute. Two years ago the party's Central Committee instructed the presidium of the USSR Academy of Sciences to define the status, laws, and duties of the lead organizations with regard to their respective problems. But that statute for the scientific-research institutes specializing in the social sciences has not yet been approved.

Hence the parallelism in their work and the unhealthy isolation that leads to the ignoring of one another's positions, and sometimes even to dissension. Many scientists feel that one can already notice today a tendency (to a considerable degree, a spontaneous one) toward the consolidation of efforts. The republic-level economic institutes are attempting more and more actively to find their place in the nationwide division of labor. Apparently the Department of Economics, USSR Academy of Sciences, and its leadership will define the methods for administering these positive processes.

The activating of scientific thought is impossible without the encouragement of the labor performed by the scientists, the improvement of the system of paying for their labor, which system has not changed for decades. Without a doubt, that would make exert an influence upon the slowdown that has been observed in the influx of talented individuals into science.

Definite hopes are instilled by the new system for payment of the labor of scientific associates, which system is currently being introduced among the economists. However, while having the goal of opening up a broad vista for giving incentives to those who are working well, it does not contain any

precise objective criteria for evaluating the labor performed by the scientists. It is felt that the management of the scientific institution is sufficiently competent and objective to give each person his due. The unsteadiness of that thesis is obvious, because it is no secret that the administrators of scientific institutions, fearing squabbles and complaints that they simply are not always capable of resolving, frequently follow a line that is by no means aimed at the sharp differentiation in payment depending upon the scientific contribution made by the associates, but at the gradual increase of salary for everyone. The new system of providing incentives for scientists has the risk of becoming yet another good idea which will wither away because of the poorly thought-out mechanism for implementing it.

It would seem that we cannot expect any revolutionary shifts in economic science until there have been substantial changes in the forms of communication among scientists, and in the exchanging of opinions among them, until in economic science, as in other spheres of our life, it becomes the rule to listen not only to sweet-sounding speeches, but also to impartial criticism.

Disputes in science, the conflict of views, constitutes a necessary condition for progress in science. But leaf through the economic journals and listen to the statements made at sessions of scientific councils. Are we really to believe that these slick articles and speeches, which are replete with generalizations and dozens of qualifying statements, are the modern variety of scientific disputes? If one were to judge from them, one could easily conclude that there are almost no complicated, unresolved problems in our life. By way of scientific criticism, the journals in most instances publish sympathetic, complimentary reviews which, as a rule, are organized by the book authors themselves.

The attempt to improve the situation without changing anything has also swept over economic science. Hence the empty, fruitless discussions that last for decades. At the same time there has been no really thorough analysis of how, when, and precisely what forms of production relations are beginning to retard the development of productive forces, or along what directions their reorganization, the radical reform of the economic mechanism, is supposed to occur. The question of the subjects of production relations and their interests and motivations for activity has been relegated to oblivion. Isn't this one of the reasons why we observe in scientific works a schematological image of production relations which is far removed from reality?

We talk a lot nowadays about the creative atmosphere in our life. And this is justifiable. That atmosphere is necessary. It helps us to work and act. This situation is a mandatory condition for the viability and solvency of the scientific collective. If we were to say that the economists flourished in that atmosphere, it would be greatly exaggerating the situation that has developed. The scientists in the older generation, not without good reason, complain about the loss of the school of scientific guidance, which was strong in that very Institute of Economics 30-40 years ago. The leader of the scientific subdivision was traditionally viewed as (and was) its ideological inspirer, a model of devotion to his work and of competency. Close scientific communication within the collective was the norm.

indisputable even despite the broad extension of collective forms of research. And if today economic science cannot boast of an abundance of ideas, it is necessary to ask oneself over and over again, "How are things going for the scientists? Is their labor always efficiently organized? Are the scientific associates always chosen correctly? What is the gauge of their responsibility to society?" And then it is necessary to take immediate steps to carry out the urgently required reorganization.

Intensification Factors

Moscow EKONOMICHESKAYA GAZETA in Russian No 30, Jul 86 pp 2, 4

[Article by A. Fedotov, senior scientific associate, TsENII [USSR Gosplan Central Economic Scientific-Research Institute]: "Factors of Intensive Growth"]

[Text] The complete and consistent intensification of production constitutes, in the acceleration developed by the party, a decisive condition for increasing the rates and effectiveness of economic growth. The necessity and possibility of the changeover to the intensive type of expanded reproduction are determined primarily by the level of the production and scientific-technical potential that has been created in the country.

Change of Dynamics

... already existing fixed production assets and the labor and materials that have been involved in production act as the chief prerequisite that guarantees further economic growth by means of all the factors of the intensification of production. Herein the general natural laws underlying expanded reproduction find their manifestation. The necessity for the intensification of production is also determined by the growing needs of the national economy and the population and by the higher requirements on the quality and variety of the output being produced. Economic growth by means of quantitative buildup and the involvement, the involvement of additional resources in the national economy, narrows the possibilities for an increase in the consumption fund and the development of the nonproduction sphere.

At the June Plenum of the CPSU Central Committee, characterizing the peculiarities of the plan for the 12th Five-Year Plan, M. S. Gorbachev emphasized that, on the whole, the plan corresponds to the principles enunciated at the 27th CPSU Congress, and stipulates the concentration of the manpower and funds in the key sectors of the development of the economy and the change of the structural and investment policy in the interests of the intensification of social production.

The steps to accelerate scientific-technical progress and the shifts in the investment and structural policy made it possible to substantiate by means of technical-economic computations the assignments that guarantee during the years of the 12th Five-Year Plan a fundamental turning point in the matter of intensifying social production and increasing its effectiveness.

The consistent, complete intensification of the economy is characterized by the economizing, per unit of national income of social product, of all types of resources -- manpower, raw and other materials and energy, capital investments, and fixed production assets. The growth of labor productivity must be combined with a reduction in the material-intensity and capital-intensity of production. Under the conditions of the acceleration of the socioeconomic development, it is not individual branches that make the changeover to methods of intensification, but, rather, the national economy as a whole.

A factor of special importance is the principle aimed at the intensive use of production potential that has been created and of the fixed production assets, the improvement of the dynamics of the return on investment. Within the forthcoming 15 years it is planned to make a major change in the dynamics of this indicator also: at the first stage, in the first half of the 1990's, to stabilize the return on investment; and subsequently to guarantee its growth.

The importance of the return on investment for the final results of production is determined primarily by the scope of the fixed production assets. Their value as of the beginning of 1986 in our country's national economy constituted 1.57 trillion rubles. The preservation of the tendency that has developed toward a reduction in the return on investment would require in the future higher and higher rates of buildup in the capital investments in material production and would increase the fixed production assets with a considerable outstripping with respect to the growth of the national income. That would predetermine a slowdown of the renovation of the existing production apparatus, and a reduction of the growth rates of capital investments in the nonproduction sphere, and, as a consequence, would limit the opportunities for resolving the social tasks.

The chief peculiarity of the 12th Five-Year Plan, its difference from the previous periods, consists specifically in the fact that the process of intensification has encompassed all the factors of production and national-economic resources. First of all, there has been an increase in the role of labor productivity as the chief factor for economic growth. Labor productivity for the national economy during the five-year plan will be increased by 23 percent, and that will make it possible to guarantee the entire increase in material production with practically no involvement of additional manpower.

In the 12th Five-Year Plan a large part -- 65-70 percent -- of the additional need of the national economy for fuel and raw materials will be guaranteed by means of resource conservation. In conformity with the plan, in 1986-1990, for the first time in a number of five-year periods, it is planned to achieve a sharp increase in the effectiveness of capital investments. There will be reduction of more than half in the rate of reduction of the return on investment in the national economy, and for machine-building and light industry that negative tendency of many years standing will be completely overcome. New approaches to the resolution of the tasks of increasing the return on investment are linked with the technical re-equipping of production on the basis of the latest, highly effective means of production for purposes of producing high-grade output that corresponds to worldwide achievements,

with the widescale acceleration of worn-out and obsolescent equipment and with a substantial increase in the degree of workload placed upon the technology as a result of the organization its two-shift and three-shift operation.

New Form of Interaction

The changeover to complete intensification is characterized by a new form of interaction among the economic growth factors. As a result of the fundamental transformation of the material-technical base of production, in the overall total of sources of economic growth the economizing of all types of resources will begin to occupy the predominant place.

The action of the intensive factors is expressed in the maximizing of the beneficial result in the form of the final output, with limited expenditures of the gross resources of live and embodied labor, in the obtaining of the assigned result with the minimum expenditures.

The basic peculiarity of the complete intensification of production on the basis of the broad use of the achievements of science and technology consists in the combination of the saving of live labor and the simultaneous reduction of the relative expenditures -- in terms of each unit of output -- of fixed production assets and raw-material, energy, and material resources. Putting it another way, the final result of the application of producer goods, which is expressed in an increase in the productive force of labor, grows more rapidly than the volume of expenditures of all types of resources.

In the final analysis the saving of means of labor and the reduction of material-intensity act as an additional factor for the saving of labor resources, inasmuch the need of them for increasing production in the raw-material and capital-creating branches is relatively reduced. That means that the saving of the social fund of work time changes over to a higher level, and the opportunity opens up for reducing the share of the able-bodied population employed in the material production sphere.

Serving as the initial characteristic for the increase in the effectiveness of production is the comparison of the growth rates planned for 1986-1990 for the national income to be used for consumption and accumulation, with the dynamics of the expenditures of the fixed production resources. An increase in the national income by 22.1 percent will be achieved practically completely by means of the increase in labor productivity. The energy-intensity of the national income is supposed to be reduced during the five-year period by 8.5 percent, and its metal-intensity, by 14 percent.

The evaluation of the influence that the intensive factors exert upon the correlation that is planned in the 12th Five-Year Plan between the expenditures and the results of economic growth is made possible by an analysis of the dynamics of the growth indicators of the effectiveness of production. Those indicators express the ratio of the increase in the national income during the period being considered to the extent of the resources additionally involved in production -- to the increase in the number of workers employed in material production, fixed production assets, and objects of labor.

The growth indicators, while characterizing the level of effectiveness of the resources additionally used in production, are a kind of indicator of the qualitative changes occurring in the economy. This approach differs substantially from the evaluation of effectiveness on the basis of the ratio of the overall volume of the national income to the total volume of expended resources. These averaged indicators of effectiveness indicate the width and depth of the penetration of the intensification processes into production. But the growth indicators can serve to evaluate the current changes in the correlation of the intensive and extensive factors of economic growth.

The comparative dynamics of the growth indicators of effectiveness in the 11th and 12th five-year plans reveal the acceleration in 1986-1990 of the processes of the intensification of the economy.

The growth of the final results in the 12th Five-Year Plan was stipulated with a substantial reduction in the increases of the most important resources and with the simultaneous improvement of all the qualitative work indicators. Thus, the national income to be used for consumption and accumulation will increase by 22.1 percent as compared to 16.5 percent in the 11th Five-Year Plan. That result is being achieved with a lesser increase than during the previous five-year period in the number of persons employed in the branches of material production, the production of objects of labor, and fixed production assets.

The acceleration concept that has been made the basis of the assignments of the five-year plan and the line aimed at the deepening of the intensification of social production also manifest themselves in the substantial increase in the absolute rises in the most important economic indicators. National income, which characterizes the final results and effectiveness of economic activity, will increase by 124 billion rubles, as compared with 79 billion rubles in the 11th Five-Year Plan; the increase in industrial output will be 200 billion rubles, instead of 133 billion rubles; and the average annual gross output of agriculture will be 29 billion rubles, as compared with 10 billion rubles.

Chief Intensification Lever

The new quality of the interaction among the intensification factors is influenced by the opportunities for scientific-technical progress. New generations of machines and equipment, and progressive technological processes, guarantee a considerable increase in labor productivity with a simultaneous reduction of the capital-intensity and material-intensity of production, and also guarantee the improvement of the quality of output. The acceleration of scientific-technical progress is becoming the decisive condition for increasing the rates and effectiveness of production.

The priority trends in scientific-technical progress combine with the mass use of the technical innovations that have already been well-tested in the practical situation and have proven their worth. By means of the use of the achievements of science and technology during the 12th Five-Year Plan, in industry two-thirds of the increase in labor productivity will be guaranteed.

The fundamental improvement of the indicators of the effectiveness of production on the basis of the acceleration of scientific-technical progress is that base on which the 12th Five-Year Plan is constructed.

The strategy of the acceleration of scientific-technical progress stipulates the expansion of the work front in the scientific, construction-planning, and design research that is aimed at the creation and assimilation of fundamentally new types of technology and technological schemes as the basis of the further buildup of the scope of resource conservation, and, consequently, the increase in the economic effectiveness of production.

In the process of the scientific-technical revolution, there was formed a new type of technology in the broad sense of the word, a technology which, in combination with the new principles of obtaining energy and materials, is capable of introducing qualitative transformations into the system of the productive forces of society. Take, for example, the role of one of the central elements of the new type of technology — electronics. The inclusion of electronic computer technology in the classic system of machinery opens up opportunities for fundamental improvements in it, and the creation of completely automated production systems that encompass both the basic and the subsidiary operations. Such functions of human labor as the monitoring and servicing of the technological process are transferred to the technical means.

Something that is becoming another distinguishing feature of production is the fusion of the flows of energy, materials, and information into a single process. Informat^{ion} acts in it as a resource which, to one degree or another, substitutes for material expenditures.

An especially high benefit in resource conservation is guaranteed by the fundamentally new technological processes -- cathode-ray, plasma, pulse, biological, radiation, membrane, and chemical. Electronic computer technology in those technological processes fulfills the functions of regulating and controlling them.

While opening up opportunities for a considerable increase in the productive force of labor, the new-generation technology also makes qualitatively higher demands on the workers' general-educational and qualification level and promotes positive changes in the nature and content of labor.

Under conditions of the acceleration of scientific-technical progress, there has been a substantial change in the role of simple reproduction in increasing the effectiveness of the economy. The replacement of means of labor which are being withdrawn by increasingly more productive and effective ones guarantees an increase in the production of output with the same consumption of resources.

Influence of Structural Shifts

With the achieved scope of production, any changes in the national-economic proportion, even those which at first glance appear to be not very significant, exert a substantial influence upon the absolute size and dynamics

of the final results. The improvement of structural relations at all levels — from the national economy to the enterprise — becomes an important factor in the intensification of production.

If, during the 12th Five-Year Plan, we see the preservation of that proportion of distribution of production capital investments into remodeling, technical re-equipping, and construction which developed in the 11th Five-Year Plan, the increase in the national income would be 10-12 billion rubles less. The increase in capital investments in remodeling and technical re-equipping from one-third to one-half, as stipulated by the Basic Directions, all other conditions being equal, makes it possible to increase the absolute growth of the national income by 10-11 percent.

At the same time the necessity for new construction remains, and this is linked with the constant process of developing new branches and production entities, and with the economic assimilation of new territories, especially in the areas of the east and north, where 80 percent of the country's natural resources are concentrated.

The structural policy is also used actively for progressive shifts in the territorial proportions of production. In this regard the effectiveness of the capital investments for the development of Siberia and the Far East is of exceptionally great importance for resolving the tasks of the complete intensification of production. The share of the eastern and northern areas in the overall volume of capital investments has a constant tendency toward increase. However, the production in those areas in all branches, with the exception of the fuel industry, is characterized by higher capital-intensity. One of the reasons for its increased level lies in the fact that each unit of capacity to be activated required higher direct and related capital investments. A reason of no small importance is the insufficient level of completeness of processing of the natural raw materials. For example, the output produced from a cubic meter of wood in Siberia is one-half the output for the country as a whole. Many useful components are lost during the extraction of petroleum and gas.

In the near future it is possible to achieve a considerable increase in the share of the eastern areas in the nationwide production of many types of industrial output, including mineral fertilizers, plastics, synthetic rubber, chemical fibers, lumber, and products of wood-processing. The structural policy must actively counteract the possible influence that the shift to the east has on the dynamics of the national-economic return on investment. For these purposes it is necessary to guarantee that the development of the processing branches has priority over the development of the extractive branches, and to guarantee the planned stabilization of the share of capital investments to be channeled into the extraction of fuel and raw materials.

The structural policy has also been called upon to promote the broad introduction of resource-conserving technological schemes, inasmuch as the use of the economized raw materials and fuel proves to be from one-third to one-half as expensive as the buildup of their extraction. Therefore, when forming new production entities in the areas of Siberia and the Far East, especially as part of large-scale territorial-production complexes, the first-priority

attention must be devoted to the introduction of progressive technological schemes with little or no waste products.

The activating of the structural policy presupposes the improvement of interbranch interaction in the complete use of the resources of raw and other materials. The departmental approach to these problems and the lack of coordination in the work of related branches that provide the national economy with raw materials and fuel are leading to considerable losses. The basic reserves for increasing the production of output have been concentrated not in the sphere of extraction, but at subsequent stages — in the processing of the raw materials (including their concentration) and, for the greater part, in the sphere of obtaining the finished product.

Thus, the efficient combination, on a planned basis, of the structural and scientific-technical policy is transformed into one of the decisive conditions for the complete intensification of production.

Legal Aspects

Moscow EKONOMICHESKAYA GAZETA in Russian No 30, Jul 86 p 6

[Article by Yu. Tikhomirov, doctor of legal sciences, professor, department head of the USSR Council of Ministers Academy of the National Economy, under the rubric "Discussion: Reorganization of the Economic Mechanism": "Sphere of Administration: Precision of Decisions. The reorganization of the economic mechanism also includes the improving of the systems and structures of administration, and the entire organization of administrative labor"]

[Text] The precise distribution of the rights, duties, and responsibility at every level of administrative activity is the pledge of the successful resolution of the tasks, the condition for highly efficient administration. Those are the chief trends in the work.

Rights and Duties

The first area is linked with improving the legal status of the administrative agencies and economic links. At the June Plenum of the CPSU Central Committee, mention was made of the need to adopt a law governing the enterprise and association, in which it is necessary to establish firmly the legal guarantees for their independence, including those in their interrelationships with other links.

New general statutes are also being prepared for ministries and state committees, in conformity with which the statutes governing the individual central agencies will be changed. Work has begun in the branches to reconsider the statutes governing the structural links in the ministries. Under the new conditions it is important to define precisely for each administrative link its powers, functions, ties, and the foundations and types of its responsibility, and to refine the instructional guides pertaining to each assignment. It is necessary to put into effect promptly the documents pertaining to the interbranch complexes. Otherwise it is difficult to assure the smooth operation of the entire administrative and economic mechanism.

The second area is the reorganization of the psychology, the mental attitudes of the economic managers, the correct orientation of the cadres toward the thorough analysis of the processes that are occurring, and the skillful resolution of the tasks that arise. For the low-level links today the most important thing is the higher level of self-organization and responsibility. The problem lies in assuring the real mastery and consistent use of the broader rights given to the associations. The application of long-term economic norms makes it possible to maneuver rapidly and to implement more completely the opportunities for choosing the alternatives in the decisions that are to be made independently. And their percentage has been growing. There has also been an expansion in the sphere of contractual relations, and this requires greater maneuvering.

The new tasks of centralized administration, while guaranteeing broad independence and initiative to the basic production link in the national economy, fundamentally change much in administrative activity.

Take, for example, the problem of interbranch interaction. At the places where the branches and departments abut, one sees today the checking of the durability and flexibility of the economic mechanism, and the ability to overcome the narrowly regional and departmental interests.

Under conditions of the formation of large-scale national-economic complexes, the contacts which are becoming the typical ones are not the one-time contacts, but, rather, the regular interaction of the ministries in the process of administration. Here are two examples. In the machine-building complex, structural-personnel questions are being resolved on a single methodological basis, and a standard statute governing the main production administration with regard to the guidance of the subbranch is being prepared. In the agrocomplex the internal economic ties between the partners are being deepened, although this has been no simple process.

Of course, much here depends upon the active position of the ministries and the associations and upon the understanding by the managers and the labor collectives of the importance of the first-priority resolution of the state tasks, and of the satisfying of the social needs. Then the integration mechanism will also form in a gentler, more elastic manner.

We would like to cite the experience of Minavtoprom [Ministry of the Automotive Industry], which took a course aimed at cooperation with the other ministries in the resolution of major problems. For example, in the construction of the ZIL Association plants in the city of Yartsevo, Smolensk Oblast, a lag was discovered in fulfillment of the plan for construction-and-installation operations. The subcontractors had also been lagging behind. With the purpose of exerting a comprehensive effect upon the state of affairs, Minavtoprom, USSR Minmontazhspestroy [Ministry of Installation and Special Construction Work], and USSR Minergo [Ministry of Power and Electrification] late last year issued a joint order concerning the acceleration of construction. The specific and coordinated assignments to the associations and trusts, precise schedules for the delivery of construction materials and the activation of equipment and the construction of items intended for housing

and everyday purposes, additional technical assistance, and the prompt resolution of questions on the spot provided the opportunity to correct the situation. Jointly with the other ministries, Minavtoprom also implements the decisions concerning the organizing of the production of new models of trucks and the technical re-equipping of the Urals Motor Vehicles Plant.

Shouldn't one make such ties more stable and more planned? It would seem that it is possible to conclude for one or two years agreements between the ministries for the fulfillment of comprehensive operations.

It would seem to be desirable to regulate precisely in the statutes and the assignment instruction guides all the types of administrative ties. Then the outside contacts will be synchronized with the overall rhythm of activity. There is a need for procedures for making decisions within the confines of the interbranch complexes, because it is precisely there that the center of gravity is being shifted. The previously mentioned agreements will also help the situation.

Unfortunately, in the practical situation there have been a rather large number of instances of the unskillful use of the broader rights, a fear of responsibility, of "waiting" for instructions from above. The reorganization has been proceeding slowly, especially in the administrative apparatus, where no reconsideration is being made of the functions or the information flows and the structures are not being changed. Personnel turnover has been "postponing" analytical work and computations, and the bold maneuvering for the future.

The first months of the reorganization of branch administration indicate how important the skillful redistribution of the functions is. The overall statute governing USSR ministries (paragraph 8) allows the transferring by them of questions for resolution by enterprises of union subordination. At Minelektrotekhprom [Ministry of the Electrical Equipment Industry] at the end of last year, there was an expansion of the rights of the NPO [scientific-production associations], PO [production associations], and enterprises at the expense of part of the functions of the abolished VPO [all-union industrial associations]. In other branches those functions have been transferred to the ministry level.

Meanwhile the functions of the ministries under conditions of the expansion of the independence of the associations and enterprises and the broad application of the new administrative methods have been changing. The main thing now is to select the strategic questions that require resolution at the upper level. But the managers at the lower link should not transfer to the upper level the questions for which they have been given the responsibility. Everyone is responsible for his own job. Therefore it is necessary, in a normative procedure, to define the foundations for the responsibility of all links and officials also for the failure to make decisions within the confines of their competency.

It is also necessary to have additional guarantees of the rights of the associations and enterprises. Apparently the recommendations to deem to be

inoperative the acts taken by the ministries with regard to questions that have been made the responsibility of the low-level link are justified.

Businesslike Style

And, finally, there is a third area. The party has subjected to decisive censure the negative style of administration, in which everything is reduced simply to conferences, decisions, and plans for measures to be taken, but when there is a poor analysis of the changing situation and no organizational work is carried out. That administrative style leads to a situation in which the administrative decisions exert little effect upon the rate of the processes. What is needed is another, improved approach to the organizing of administrative labor. That labor should not be viewed as the totality of disconnected actions. It is a chain in the measures to be carried out in a consistent manner for the fulfillment of the functions that have been entrusted to a particular administrative link.

The classification system for functions in the branch for ministries and associations, which system was approved by the USSR State Committee for Science and Technology, makes it possible to determine the degree of fulfillment of various administrative functions. For that purpose it is beneficial to carry out a regular analysis of the changing situations and to organize the administrative influences upon them. In the branches, in our opinion, it is necessary to have methodological recommendations for the fulfillment of the functions of the PO. They must reveal the procedure for evaluating the functions and official powers to be implemented, and the psychological aspects of choosing the decisions for tasks that arise. Their implementation will be aided by the rules for making and executing decisions. That chain corresponds to the logic of administrative knowledge and action.

One can also cite practical examples. In Ulyanovsk, at two plants and in the Murmanskaya Sudoverf Association, the Rules for Preparing, Making, and Execution of Decisions have been introduced. Those rules define the types and attributes of all the administrative decisions, all the stages in the process of moving them ahead and of evaluating their effectiveness. It would also seem to be desirable to have standard rules for the issuance of acts in the ministries, since that would help to improve their quality.

Under present-day conditions much has to be changed also in the work with information. Observations indicate that the types of information and its content have not yet been standardized. The regulations concerning the use of information at computer centers are not always observed. For example, last year in the Glavtyumenneftegaz system there were 522 violations of the regulations for the processing of information — delay, errors, etc.

It is important to achieve precise general data support for all types of administrative links. At the present time the collection by each participant of information "for himself" does not provide the opportunity to see the entire picture. There is also a large amount of duplicated information. The main computer centers of the ministries have been poorly coordinated with one another.

Within the confines of the interbranch complexes at the present time one can achieve the better resolution of the questions of collecting and using information on the basis of the latest electronic computers for the critical spheres of activity. In addition, the creation of the State Committee for Computer Technology and Information Sciences has been facilitating the coordination of the work to use the electronic computers. There is a vital need for a law governing information in the national economy, which would firmly establish its system and types, the requirements for maintenance, and the rights and responsibility of the agencies and workers. Special attention in this normative document should be devoted to conditions for using machine data, including its use on the basis of contracts, and its protection.

Obviously, it is also necessary to think about refining the classification of the personnel assignments and workers, and the standard tables of organization. This is especially important since, not infrequently, the number of managers in the structural links exceeds the number of specialists.

Today it is a matter of guaranteeing the reorganization of administrative labor in all links, from top to bottom, on a single scientific-methodological basis. And much depends here upon the coordinated actions of the scientific centers and the introduction of scientific achievements into practice. Steps in this direction have indeed been taken in a number of branches. Minelektrotekhprom has created a subdivision that engages in questions of improving administration. Minpribor [Ministry of Instrument Making, Automation Equipment, and Control Systems] has developed a comprehensive program of projects for improving administration in the branch for 1986-1990.

Of course, it is also necessary to take complete consideration of the time factor. The acceleration of socioeconomic development presupposes the speed of actions not only in the production sphere. To an even greater degree it is necessary in the administrative sphere, where slowness and delay, the inability to ascertain the problem and to select the means of resolving it, and a predilection for coordinations harm the job at hand. Time is the universal category of progress, and a category that must also be employed for evaluating the effectiveness of administrative labor.

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CSO: 1820/193

PLANNING AND PLAN IMPLEMENTATION

NATIONAL TARGETS FOR 12TH FYP HIGHLIGHTED

Moscow EKONOMIKA I MATEMATICHESKIYE METODY in Russian No 3, May-Jun 86 pp 387-396

[Article: "Frontiers of the 12th Five-Year Plan"]

[Text] The Political Report of the CPSU Central Committee to the 27th CPSU Congress, which was given by Comrade M. S. Gorbachev, General Secretary of the CPSU Central Committee, and the other materials from this historic congress have substantiated creatively and from unassailable Marxist-Leninist positions the concept of accelerating socioeconomic development, and an entire complex of party, state and social matters has been rethought. They innovatively determined both the strategy for moving towards a qualitatively new state of Soviet socialist society and its tactics, the specific tasks of the 12th Five-Year Plan.

The congress summed up the results of preceding development. Soviet society has advanced considerably in its development since the adoption of the Party Program. There have been tremendous advances in the economy, culture, the social area, and in raising a generation of creators of the new society. The road to space has been opened for humanity. Military-strategic parity has been ensured, which has substantially restricted the aggressive plans and opportunities of imperialism to unleash a nuclear war. The positions of our homeland and of world socialism in the international arena have been significantly strengthened. All this convincingly confirms the vitality of Marxist-Leninist doctrine and the enormous potential of socialism.

At the same time, in evaluating what has been achieved on its merits, the CPSU leadership considered it its duty to speak honestly and directly at the congress to the party and the people about mistakes in political and practical activity, about unfavorable trends in the economy and in the social-spiritual sphere, about the reasons for these phenomena. For a number of years, problems in developing the country have arisen faster than they have been solved. We face the full-blown task of overcoming as quickly as possible negative phenomena in the socioeconomic development of society and imparting the necessary dynamism to it.

The directive to accelerate the socioeconomic development of our society which was put forward at the April (1985) CPSU Central Committee Plenum is an expression of the party's profound awareness of the fundamentally new situation which has arisen at this abrupt turning point in the life of the country and evidence

of its will and resolve to effect the necessary transformations. Acceleration signifies not only increasing the pace of economic growth, but also growth that is different in quality: comprehensive production intensification on the basis of scientific-technical progress, structural re-ordering of the economy, and effective forms of labor management, organization and stimulation. The policy of acceleration also anticipates conducting an active social policy, consistent affirmation of the principle of socialist justice, perfecting social relations, renewing the forms and methods of political and ideological institution functioning, intensifying socialist democracy, and resolutely overcoming inertia, stagnation and conservatism.

The 12th Five-Year Plan is the first stage, and a very important one, in the practical implementation of this long-range strategy. Its primary task, as is emphasized in the "Basic Directions of USSR Economic and Social Development for 1986-1990 and Up To 2000," is to quicken the pace and increase the effectiveness of economic development on a base of accelerating scientific-technical progress, production retooling and renovation, intensive use of the available production potential, perfecting the system for directing the economic mechanism, and, on this basis, achieving continued improvement in the well-being of the Soviet people.

The dynamism of the national economy is convincingly reflected in the growth in the absolute increments in the most important indicators. National income increment has increased 1.6-fold (this indicator decreased this past five-year period). National income will reach 614 billion rubles in 1990 and industrial production will reach one trillion rubles.

Inasmuch as the current five-year plan is called upon to lay the foundation for increasing the rates of socioeconomic development in the next decade, the rates of increment in production capital investment must be increased by 25 percent, as against 16 percent this last five-year period. This will entail certain changes in the proportions of national income distribution, increasing the share of the accumulation fund.

This maneuver will be made as social production efficiency is increasing, which will permit a significant increase in the absolute size of the consumption fund. The increment in this fund will be 74 billion rubles during the five-year plan, as compared to 55 billion rubles this last five-year plan.

We have planned a decisive step forward towards intensifying the national economy in the 12th Five-Year Plan. End results are to increase with a substantial reduction in increment in the most important resources and with simultaneous improvement in all quality indicators. Social labor productivity is to increase by 20-23 percent, as against 16.5 percent this past five-year plan. For the first time, practically the entire increment in national income and in the output of industry and other production branches is to be obtained through increased labor productivity. The increment in labor resources is to be reduced to 3.2 million people. The national economy would require more than 22 million additional workers were labor productivity not to increase.

Economizing must become the main source for meeting the additional demand for fuel, raw and other materials. Over the next five years, 60-65 percent of the

increment in the demand for the most important resources is to be met through such economizing over the next five years. The whole range of techniques for solving the resources-conservation problem must be used -- new equipment and technology, modern forms of organization, an effective economic mechanism, a maximum of recovered resources. Improving product quality is, in the final analysis, also a question of product quantity, of saving resources; over the next five years, we plan to nearly double the proportion of manufactured goods in the highest quality category, while substantially increasing the objectivity of product certification.

The "Basic Directions" set very important and very taut assignments for production growth and improving the well-being of the people, and they anticipate providing the Soviet Armed Forces with everything necessary to defend the homeland. In laying the foundation for implementing long-range party strategy, this five-year plan must become a breakthrough both from the viewpoint of rate of growth and in terms of efficiency and organizing plan fulfillment.

The congress provided a clear response to the question of what the ways of intensifying the economy in the 12th Five-Year Plan are.

It cited accelerating scientific-technical progress as primary among them. One of the most important areas is the broad utilization of advanced technologies. We intend to increase their use by 50-100 percent. Fundamentally new technologies such as membrane, laser and plasma techniques, superhigh pressure and pulse loading, and so on, will play an appreciable role. Another area is production automation and mechanization. The level of automation is to rise two-fold. We intend to put about 5,000 automated technological process control systems into operation. Inasmuch as present-day automation relies on computers, we anticipate the development and utilization of new generations of all classes of computers, from supercomputers to personal computers for instruction in the schools. Total production of computer equipment is to increase 2.3-fold. Rapid development of robot equipment, rotary and rotary-conveyor lines and flexible manufacturing systems will be characteristic.

Production materials-intensiveness must be substantially reduced through the extensive use of effective types of metal products, plastics and other progressive materials, whose production is to be increased by more than a third over the five years, given only six-percent growth in the production of traditional materials.

As a whole, the mastering of new equipment and technology will provide more than two-thirds of the increment in social labor productivity and a 28-billion ruble reduction in net cost in industry.

One innovation in investment policy in the 12th Five-Year Plan will be its orientation towards accelerating scientific-technical progress, towards qualitative transformation of the material base and structure of production. The increment in capital investment will increase from 125 billion rubles in 1981-1985 to 170 billion rubles in 1986-1990.

Capital investment in the machinebuilding complex will increase 1.8-fold and will accent development of those branches on which qualitative advances in the technical level of machinebuilding itself depend.

Particular attention will be paid to the fuel-energy complex. Given that fuel production and transportation are becoming increasingly complicated, a reliable fuel supply for our national economy and the states of the socialist community requires that capital investments in this sphere be increased 47 percent, and the rates of capital investment increment in developing production which determines effective methods of producing and processing fuel will roughly double.

In accordance with the Food Program, a third of all capital investment is being directed into the agro-industrial complex. Whereas the overall increase will be 22 percent, it will be 51 percent in the branches processing agricultural raw material, which will enable us to overcome the disproportions retarding end product growth.

One characteristic feature of the new five-year plan is its reliance on retooling and renovating existing production. The share of capital investment being allocated for these purposes is being increased from 37 percent in 1985 to 50 percent in 1990.

The change in the capital investment reproduction structure will enable us to overcome the recent trend towards obsolescence and obsolescence in the production apparatus. The coefficient of annual withdrawal of obsolete equipment from production has risen to an average of 5-6 percent, that is, a level ensuring planned national economic effectiveness. We are also faced with changing depreciation policy. As the branches change over to the new economic mechanism, enterprise and association development funds earned by the collectives will play a basic role in retooling and renovation.

Radical restructuring of capital construction and improving its effectiveness are a central link in investment policy. The priority of retooling and renovation demand some restriction on new construction, which will be done only to achieve major advances necessary at the present stage of scientific-technical progress. We need to put a decisive end to the scattering of funds, to constrict the construction front. We are faced with raising its level of industrialization and transforming construction production into a unified production-construction process.

It is also important to achieve fundamental improvement in construction planning. Responsibility for this lies not only with the planners, but also with the ministries and departments. The USSR Gosstroy must, without undermining the ministries and planning organizations, conduct a unified scientific-technical policy in construction, develop a system for evaluating project quality and technical level, and make extensive use of competitive planning.

Exceptional importance is being attached to structural policy, to the choice of priorities, to shaping interbranch and intrabranh proportions. Outstripping growth in end products -- machinery, equipment, consumer goods, finished construction projects -- as compared with so-called intermediate products such as fuel, raw material and semifinished goods, is an important feature of the five-year plan. End product increment will be 40 percent higher per ruble of increment in the cost of raw and other materials than in the last five-year plan. Another feature is the accelerated development of branches ensuring that the

national economy will reach the world's leading scientific and technical frontiers -- electric power engineering, chemical and petrochemical industry, machine building. Finally, every branch, without exception, is now oriented towards producing consumer goods and towards the services sphere. We anticipate increasing the outstripping development of Group-B industry as compared with Group-A.

The most substantial advances will be associated with machine building. The rates of its development will be 90 percent higher than for industry as a whole. The structure of production must be changed; machinery and equipment quality must be improved. Annual updating of machine building output is to increase to 13 percent by 1990, as against 4.5 percent in 1985. Machine tool and instrument manufacturing, electronics and electrical engineering, on which the technical level of development of the entire complex depend, will grow considerably faster than machine building as a whole.

The main thing in the structural materials complex will be to increase the proportion of progressive, economical types. For example, the structure and quality of metal products will be improved in ferrous metallurgy through retooling. In nonferrous metallurgy, reliance is being placed on the comprehensive use of resources and on increasing the release of new products. The replacement of metals and other traditional materials with chemically-derived materials will be accelerated.

In accordance with the USSR Energy Program, there will be major advances in the structure of the fuel-energy complex. Thus, nuclear power plants will nearly double their share of electric power generation by 1990, to more than 20 percent. The proportion of gas in our fuel-energy resources will increase to 38 percent. Western Siberia must provide two-thirds of all oil production. In the coal industry, particular attention is being paid to open-pit mining in the eastern regions.

There will be greater orientation towards satisfying the diverse and growing needs of the Soviet people more fully. The development of branches producing foods and nonfood commodities is being accelerated. The branches comprising the agro-industrial complex will be interacting more closely and in a more coordinated manner. The material-technical base of agriculture will be significantly strengthened. Thanks to this, we intend to increase grain production to 250-255 million tons and meat production to 21 million tons on the basis of intensive technologies and new methods of management and administration. In accordance with the Comprehensive Program of Consumer Goods and Services Development, nonfood commodities production is to be increased by 30 percent, that is, at a pace exceeding the volume of industrial production as a whole. Assortments are to be broadened and quality is to be improved.

Transport, communications and information, material-technical supply, warehousing and the highway system -- the infrastructure -- faces important tasks involving its comprehensive, coordinated development.

The development of all the union republics and major regions will be approached from positions of an efficient territorial division of social labor within the framework of a unified national economic complex. One of the important problems

to be solved in this area is closer coordination of production distribution and the availability of labor and material resources. Particular attention will be paid to the comprehensive development of Siberia and the Far East.

Foreign economic activity must be carried on in accordance with the new tasks. We anticipate broadening foreign economic ties and concentrating them on the priority tasks, targeting scientific-technical progress and using it more to resolve social problems. We intend to improve the structure of trade with foreign countries, foremost by increasing sales of machinery, equipment and other highly processed output.

Success in implementing the socioeconomic development plans is inseparably linked to developing the management system and administrative methods. The Political Report of the CPSU Central Committee to the 27th Congress emphasized that these new economic tasks cannot be resolved without a thorough restructuring of the economic mechanism, without creating an integrated, effective, flexible management system permitting fuller actualization of the potential of socialism. The situation is now such that we cannot limit ourselves to partial improvements. Radical reform is necessary. The point of it is to subordinate all production to social requirements, to meeting people's needs, and to orient management towards improving efficiency and quality, towards accelerating scientific-technical progress, towards developing worker interest in labor results and initiative and socialist entrepreneurship in every link of the national economy, foremost in the labor collectives.

The most important directions of restructuring the economic mechanism have been determined. We are set the tasks of:

- improving the effectiveness of centralized economic leadership, strengthening the role of the center in implementing the basic goals of party economic strategy, in determining the pace and proportions of national economic development and its balance. At the same time, we must overcome the practice of interference by the center in the day-to-day activity of subordinate economic links;

- resolutely pushing apart the boundaries on association and enterprise independence and increasing their responsibility for attaining the highest end results. In order to do this, we need to change them over to true cost accounting, autonomous financing and self-support, making the level of collective revenues directly dependent on work efficiency;

- changing over to economic methods of leadership at all levels of the national economy, which will involve restructuring material-technical supply, perfecting the price-setting system, financing and crediting, and working out effective counter-expenditure incentives;

- imparting to management modern organizational structures reflecting the trends towards production concentration, specialization and consolidation. The reference is to creating complexes of interconnected branches, scientific-technical interbranch centers, and diverse forms of economic associations and territorial-production formations;

- providing an optimum combination of branch and territorial management of the economy, comprehensive economic and social development of republics and regions, and setting up efficient interbranch ties;

- comprehensive management democratization, with a greater role for labor collectives, and strengthening monitoring from below, accountability and publicizing the work of economic agencies.

The restructuring of the economic mechanism has already begun. However, as Comrade M. S. Gorbachev said, this is only the start. Given our country's enormously complex economy, time and energetic efforts are required. There may be difficulties, and there are no guarantees against mistakes, but the main thing now remains purposeful movement, step by step, in the chosen direction, supplementing and developing the economic mechanism on the basis of accumulated experience and eliminating everything which is obsolete or has not proven its worth.

Success will depend largely on restructuring the activity of the central economic agencies. The USSR Gosplan is called on to become a genuine national economic headquarters freed from day-to-day economic questions. This work has begun. New agencies are being created to direct interbranch complexes, and the bulk of the functions of day-to-day management are being delegated directly to the enterprises and associations. The Gosplan and other economic departments must focus on long-range planning questions, on ensuring proportional, balanced development of the economy, on conducting structural policy, and on creating economic conditions and incentives for attaining the very best end results in each cell of the national economy. Statistics work needs serious improvement.

The most important task of financial-credit agencies is not regulating minor aspects of enterprise activity, but economic stimulation, strengthening monetary circulation and cost accounting, which is the best regulator. Everything must be made a function of end results. The time has come to improve the procedures for withholding turnover tax, payments from profits, and other budget receipts. Their amounts and payment procedures must have a stronger influence on lowering production outlays, improving product quality and accelerating output marketing.

The price system needs to be restructured, in a planned manner, as a unified whole so as to set up effective cost accounting conforming to the tasks of increasing the real incomes of the population. Prices should be made more flexible, and their levels should be linked not only to expenditures, but also to the consumer features of the goods, to the effectiveness of the items, and to the balance between the output produced and social requirements and consumer demand. Greater use of limit and contract prices is planned.

The material-technical supply system should be transformed into a flexible economic mechanism helping the national economy operate smoothly and stably. The Gosplan must actively help establish direct, long-term ties between producers and consumers on a contractual basis and strengthen delivery discipline. Wholesale trade in means of production should be developed.

We need to put an end to the practice of petty ministry and department wardship of enterprises. They should rather focus their attention on questions of technical policy, intrabrand proportions, and meeting the demands of the national economy for high-quality products from their own branches. Enterprises and organizations should be given the right to market above-plan output, unused raw and other materials, equipment, and so on, independently. Interrelationships with the public should also be legislated in similar fashion. In

this regard, the role of the economic normatives is important. By knowing in advance the conditions in a period being planned -- output delivery assignments, prices, deductions from profit to the budget, normatives for generating wage funds and cost-accounting incentive funds -- enterprise collectives will be able to develop plans ensuring higher rates of production growth and significantly greater production efficiency creatively, without being afraid of revealing reserves. Following the example of the VAZ [Volga Automotive Plant] and Sumi Machine-Building Plant, enterprises should be given an opportunity to earn for themselves the funds needed for production expansion and renovation.

The economic mechanism of enterprises and organizations in the consumer goods and services sphere is being restructured so they can respond more sensitively to customer needs. The range of assignments being approved from above for enterprises of light industry is being sharply restricted. Their plans will be shaped foremost on the basis of agreements with retail organizations which will, in turn, be responsible for their orders' corresponding to actual consumer demand. The main thing will not be gross output, but product quantity, assortment and quality that people need. Moreover, we intend to create inter-branch production and manufacturing-marketing associations to produce and market light-industry goods; we also intend to expand company retail trade.

The size of an enterprise's wage fund must be directly linked to revenues from the marketing of its output. This will help eliminate the production and delivery of poor-quality, unneeded items. This approach should also be used elsewhere besides in light industry.

An effective economic mechanism will also be reinforced by steps to strengthen the agrarian complex. The basic intention reduces to opening up a vista for economic methods of management, significantly broadening kolkhoz and sovkhos independent, and increasing farm interest in and responsibility for end results. It is essentially a question of the creative use of the Leninist concept of a tax in kind as applicable to modern conditions.

The plan is to establish firm annual produce purchase plans for kolkhozes and sovkhos and not change them over the five-year plan. At the same time, farms will be given opportunities to dispose of as they see fit all above-plan output produced and a significant portion of planned output as well, in the case of potatoes, fruit and vegetables. The farms can sell it to the state, market it unprocessed or processed in the kolkhoz markets or through the cooperative trade network, or they can use it to meet other needs, including those of personal subsidiary farming. Above-plan sales of grain to the state will be stimulated by the allocation of additional material resources in demand and through other incentives measures. In the future, republics, krays and oblasts will be assigned firm quotas for deliveries to centralized stocks, and everything produced above that will remain for local distribution.

We propose switching to improved planning methods based on progressive normatives. The role of cost accounting will be increased substantially. Genuine cost accounting, the dependence of enterprise revenues on end results, must become the norm for all links of the agro-industrial complex, and foremost for the kolkhozes and sovkhos. The contract and job-rate system will be widely

used at the brigade, link and family level, with the assignment of means of production, including land, to them for the term of the contract.

The fundamental change in management conditions in rural areas will also require serious change in the style and methods of leadership of the agro-industrial complex. We need to renounce interference outside areas of authority in rural production activity.

Intensifying the territorial approach to planning and management is an essential aspect of restructuring economic management. This is especially important for a country as large and diverse in terms of conditions and nationalities as ours is. The ministries and departments often ignore regional conditions and requirements, which results in disproportions in the economy. We should obviously be thinking about broadening the rights of republic and local agencies, in the manner of the Agro-Industrial Complex, to manage construction, inter-branch production facilities, the social and production infrastructure, and many enterprises producing consumer goods. A greater territorial orientation should be imparted to USSR Gosplan and ministry activities. The question of managing the national economy by large economic region deserves study.

Particular importance is attached to social development and improving people's well-being in the 12th Five-Year Plan. Resolution of the task of raising the standard of living of the Soviet people to a qualitatively new level and ensuring steady improvement in working and living conditions is organically interlinked by the party to the harmonic development of the individual, to increasing the creative initiative of the workers.

Among the diverse needs of members of society, the demand for substantive, creative labor is moving increasingly to the fore. In the new five-year plan, we need to achieve a break-through in the resolution of the urgent problem of reducing low-skill manual labor, cutting it by two- to three-fold. The accelerated updating of the production apparatus -- mechanizing, automating and incorporating electronics in production -- must be directed at revitalizing working conditions and enriching the content of labor.

Increasing the effectiveness of the wage system is a task of enormous socio-economic importance. The amount of wages paid each worker must be brought into close accord with the results of his labor. The switch to new rates and salaries in branches of material production will be made quickly, within a single five-year plan, and will represent increases of 25-30 percent. The most essential thing is that a fundamentally new and active approach has been worked out: the funds necessary to do this will be earned by the labor collectives, primarily through increased production growth and efficiency, by mobilizing internal reserves, and by improving labor organization and rate-setting.

Large sums are being allocated to increase the wages of workers in nonproduction branches. The changeover to new wage standards for all workers in public education will be completed. The wages of physicians will be raised in steps and the rates and salaries of individual categories of workers in cultural-education institutions and higher education will be increased.

The intention is bring branches of the socio-cultural sphere up to a qualitatively new level. State assistance to families with children will be significantly increased, and the material-technical base of the socio-cultural sphere, public health and sports will be strengthened. More housing will be released for occupancy, public amenities will be improved in both urban and rural areas.

In social policy, fundamental importance is being attached to better satisfaction of the effective demand for consumer goods.

Retail trade turnover will be increased by one-third. Problems of developing the sphere of fee services will be dealt with more aggressively; such services will be increased by 30-40 percent.

Science will be relied on as never before in restructuring the economy and the economic mechanism. In this connection, the Political Report of the CPSU Central Committee to the 27th Congress stressed the attention being paid to a number of pressing problems of economic science. It was pointed out that certain theoretical ideas and concepts must be re-thought. This applies to such major problems as the interaction of productive forces and production relations, socialist ownership and the economic forms of its actualization, commodity-monetary relations, and combining centralism with the independence of economic organizations, among others.

The idea that, under socialist conditions, the conformity of production relations to the character of production forces is somehow ensured automatically is unsupported. The forms of production relations and the administration and management system currently operating evolved basically at a time of extensive economic development. They have gradually begun losing their ability to stimulate the economy and have become somewhat of a brake on it. The main thing now is to change the orientation of the economic mechanism, to overcome its expenditures orientation, to target quality and efficiency improvements, accelerate scientific-technical progress, and increase the role of the human factor. We must not halt at fixed ideas, much less prejudices. If, for example, the use of economic normative instead of some directive indicators is required and justified, that signifies not a departure from the principles of planned leadership, but only a change in its methods and procedures. The same can also be said of the necessity of strengthening the independence, initiative and responsibility of associations and enterprises and increasing their role as socialist commodity producers. In objecting to the commonly-held position that any change in the economic mechanism is looked on as nothing less than deviation from the principles of socialism, Comrade M. S. Gorbachev said that socio-economic acceleration, strengthening socialism in fact, must be the highest criterion of management development, as of the entire system of socialist production relations.

The problems of socialist ownership, as the basis of our social system, have taken on great urgency. Socialist ownership includes a multifaceted system of relations between people, collectives, branches and regions of the country involving the use of production means and results and a whole gamut of economic interests. This complicated complex of relations requires some specific consolidation and constant adjustment, the more so since it is in motion. Only by thinking through these changes thoroughly at the theoretical level will we

be able to work out measures to shape a genuinely proprietary attitude towards socialist ownership.

We are faced with increasing worker interest in better using and augmenting the national wealth. In order to do this, the role of the labor collectives must be increased decisively. It is important to actualize consistently the principle that enterprises and associations are fully responsible for operating profitably. The state bears no responsibility for their obligations. This is the essence of cost accounting.

The pressing problem of adjusting socialist ownership relations so as to ensure the unconditional priority of national interests over branch and regional interests also deserves attention. We need a reliable barrier to any attempts to derive unearned income from public property.

We have by no means exhausted all the potential of cooperative ownership in socialist production. The formation and development of cooperative enterprises and organizations should be supported in every way possible where a demand for them exists. They must be widely available in output production and processing, in housing and orchard-garden construction, and in personal services and trade.

It is time to overcome the bias against commodity-monetary relations, their underestimation in practical planned economic leadership. Denying the importance of their active influence on increasing people's interest and on production efficiency weakens cost accounting and causes other undesirable consequences. The reverse is also true. Healthy operation of commodity-monetary relations on a socialist basis is capable of creating a situation in which the economic management results depend wholly on the quality of the collective's work, on the skill and initiative of its leaders.

Comrade M. S. Gorbachev has emphasized the necessity of re-evaluating again and again the situation as it develops and of resolutely restructuring that which is obsolete and outdated.

The resolute policy of intensifying social production in every way possible, of radically restructuring the economic mechanism, which has been proclaimed by the 27th CPSU Congress, makes new demands on economic mathematics research as well. The most important thing in this area is the development of a complex of models of socio-economic planning and forecasting which will encompass the various links of the national economy so as to ensure optimum decisions. We need to develop methods of comprehensive economic socio-economic planning and forecasting based on a unified system of socio-economic normatives and quality indicators.

There should be more thorough research on the principles of simulating and actualizing the concept of the economic management mechanism, using economic-mathematical and machine simulation to analyze the interconnections of the various elements of that mechanism. The interconnected parts of the complex of simulations needs to be further developed and adjusted to enable it to evaluate the effectiveness of different variants of development of the management mechanism.

much attention will be paid to analyzing the progress of and systematizing the results of economic experiments underway in various branches, enterprises and associations by using mathematical simulation methods.

We are faced with continuing our study of methodological problems and working out practical recommendations on creating a unified system of economic yardsticks which will include methods for substantiating procedures for calculating and analyzing efficiency, evaluating the diverse economic measures and recommendations involving the selection of those oriented towards intensifying social production.

Mathematical methods will also invate the social sphere more actively in the form of simulation of mechanisms for shaping public well-being, the processes whereby public needs and demands develop, balancing supply and demand, developing the social infrastructure, the development of distribution relations, and so forth.

The fundamental principles of economic-mathematical simulation should also be further developed. We need to create the tool and methods prerequisites for radically improving both the technology of economic management and the methods of conducting socio-economic research based on extensive use of economic-mathematical simulation and modern computers. In this connection, the development and extensive practical introduction of automated workstations (ARM) for planning, management and scientific workers has assumed great importance.

Implementation of this line of research anticipated the development of a theory of mathematic simulation of the socialist economy, to include: research on problems of an optimum combination of the mechanisms of centralized planning, the regional use of resources, and cost accounting; the development of methods of analyzing the problem of attaining and maintaining national economic balance; technical progress models permitting qualitative and quantitative evaluation of the impace of innovations and the influence of various factors on economic growth characteristics, and so forth. Such research will permit the creation of a system which will be a kind of testing ground for computer simulation analysis of the economic mechanism and testing various proposals for improving it.

One result of this research will be the more thorough substantiation of the initial principles of the Comprehensive Program for Scientific-Technical Progress as applicable to the intensification of social production, increasing the effectiveness of such planning and management tools as ASPR and ASU, and the development of proposals on areas of comprehensive improvement in the socialist economic mechanism.

Economists are applying all their efforts, knowledge and ability to successfully implement the great plans for creating communism which were outlined by the 27th CPSU Congress.

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CSO: 1820/167

INVESTMENT, PRICES, BUDGET AND FINANCE

FASTER RATE OF FIXED CAPITAL REPLACEMENT IN 12TH FYP SOUGHT

Moscow IZVESTIYA AKADEMII NAUK SSSR, SERIYA EKONOMICHESKAYA in Russian No 3,
May-Jun 86 pp 24-34

[Article by A. A. Malygin: "The Quicker Renewal of Fixed Production Capital"]

[Text] Aspects of the quicker renewal of fixed capital are examined in this article in their interrelationship with withdrawal and replacement, with rates of increase and length of service life, and with the development of machine building and technical progress. The reproductive structure of capital investment and its role in the renewal of capital are described, as well as the specific structure of capital. The characteristics of the reproductive process are compared with foreign data, providing a more thorough and objective understanding of current changes in the reproduction of fixed capital in connection with the intensification of national production.

One of the main objectives of the economic and social development of the USSR in the 12th Five-Year Plan is the quicker renewal of production equipment, primarily through the quicker replacement of inefficient equipment with progressive and highly productive equipment. In line with this, more than a third of the active portion of fixed capital is to be renewed, and the volume of obsolete means of labor withdrawn from production is to be at least double the volume of the 11th Five-Year Plan [3].

Scientific and technical progress, as an analysis of economic development will demonstrate, is the main factor in the intensification of production and the means of the qualitative transformation of productive forces. The decisive way of changing production potential at the present time is the use of the latest tools of labor and technological processes, based on the latest scientific and technical achievements, on a broader scale. But the acceleration of the qualitative transformation of productive forces (or, more precisely, the means of production) depends on the resolution of organizational-administrative problems as well as scientific and technical ones and on the improvement of methods of planning the reproduction of fixed capital and the use of capital investments. In this connection, the entire system of planning and management must be geared to the quickest possible use of scientific and technical

achievements and to the remodeling of existing production units and establishment of new ones with the use of progressive technological processes and means of production.

The process of the intensification of production represents a transition to a primarily intensive type of expanded reproduction. The period of the establishment of the socialist method of production in our country was distinguished by extensive reproduction, in which the renewal of fixed capital was accomplished through its accumulation because there was essentially nothing to replace as yet. Renewal in the form of accumulation and the minimal replacement of existing machines and equipment remained the norm until the beginning of the 1970's, when the shortage of new manpower was first discovered.

The policy of production intensification was adopted at the beginning of the 1970's and pursued in the 9th, 10th and 11th five-year plans. The transition to the primarily intensive method of reproduction, however, had still not been secured adequately with the corresponding renewal of production equipment. During this period the increase in fixed capital took the form of means of labor, most of which were manufactured with old technical methods, and was much quicker than necessary for the increase in manpower. Between 1970 and 1983 fixed production capital in the national economy and industry increased 2.7-fold, but the average annual number of workers and employees in branches of physical production and industry increased only 1.2-fold (calculated according to data in [5]). As a result, the primarily extensive nature of the renewal of fixed capital led to an imbalance between labor and material factors of production, and this was reflected in the incomplete use of production capacities and the rise of capital requirements per ruble of output.

During the period of transition to the intensive course of economic development, the renewal of fixed capital is nothing other than the introduction of new and progressive technological processes and new equipment as substitutes for traditional processes and equipment, securing the rise of the technical standards of production and the improvement of product quality. The goal-oriented improvement of the technical basis during the process of intensification establishes the necessary conditions for the enhancement of economic efficiency--increased output and improved product quality with lower total labor expenditures. Heightened production efficiency as a result of intensification is now an objective condition for the accomplishment of tasks stipulated by the basic economic law of socialism. The renewal of fixed production capital with means of labor manufactured on a new technical basis and in accordance with established optimal capital service life is also a distinctive feature of the material base of the intensive type of expanded reproduction.

During the 1970's the partial intensification of production and the capital-intensive form of fixed capital renewal, in which the value of machines and equipment rises more quickly than their productivity, gradually established the conditions for diminished production efficiency. In combination with the mounting shortage of labor and material resources, these conditions gave rise to the need for comprehensive intensification, requiring the renewal of fixed capital with the aid of technical equipment and technological processes lowering the output-capital ratio and securing the conservation of production resources.

The nature of renewal depends on the quality and timely delivery of replacement equipment. In extensive renewal the worn elements of the means of labor are replaced with new elements produced on the previous technical basis. Replacement with equipment of the same quality but of lower cost is also possible. This can accelerate intensification, but this almost never occurs in reality. Even if the duration of the series production of machines makes this kind of replacement possible, the cost of the machines does not secure a savings. The nature of renewal therefore remains extensive.

This is confirmed by the results of a reassessment of fixed capital in 1971 and 1972. The initial value of the majority of fixed capital was raised by 106 billion rubles, or 16 percent, and the value of the rest was reduced by 33 billion rubles, or 5 percent. As a result, the restoration cost was 11 percent higher than the original cost [6].

The intensive type of reproduction is connected primarily with the replacement of old equipment with qualitatively new and more productive equipment, manufactured on a new technical basis. Only this kind of capital renewal can accelerate the intensification of production. The task consists in finding the optimal dimensions of intensive renewal for the mass replacement of means of labor in line with time and resource limits.

If fixed capital at existing enterprises is renewed in accordance with standard service life limits, we can assume that the withdrawal of capital and its replacement are conducted in a timely manner. The standard service life (amortization period) must take the physical depreciation and gradual obsolescence of means of labor into account. Only capital in an existing production unit can be renewed at maximum speed when it has outlived its service life. Only after existing production needs have been satisfied can the rest of the new machines and equipment be used for new construction or the augmentation of the supply of fixed assets. With this sequence in the distribution of means of labor, renewal will be primarily intensive because it will be aimed at freeing workers from physical production and enhancing the productivity of human labor.

The current practice of distribution envisages the augmentation of the supply of fixed capital through new construction first and the replacement of existing capital next. In this case, renewal will remain extensive regardless of the quality of distributed means of labor. This will occur because the old equipment and machines accumulated in the supply of existing means of labor will absorb more and more labor and material resources and will reduce production efficiency.

According to statistics, the percentage of metal-cutting tools and forging and pressing equipment over 20 years of age rose by 4 or 5 points in our country just between 1973 and 1982. According to our calculations, the percentage of fixed production capital over 20 years of age in industry rose from 8 to 18 percent during this period. The rate of withdrawal declined from 1.7 to 1.3 percent a year between 1970 and 1984. During the same period there was a corresponding increase, almost 1.4-fold, in the capital requirements of industrial production [7].

National production potential depends on fixed production capital; the growth rate and structure of national production and the standard of living of the population depend on the state of fixed capital, its technical level and its degree of use. Fixed production capital incorporates everything new created by science and technology and simultaneously represents the agent and result of scientific and technical progress. The reproduction of fixed capital is now distinguished by the fact that the tremendous (over 1.5 trillion rubles) production potential accumulated in the national economy, calculated as the total value of existing enterprises with their fixed capital and production capacities, urgently needs improvement, renewal and redirection in accordance with the current objectives of national production intensification.

The conservation of labor and material resources, the growth of production output as a result of qualitative changes in productive forces, and the improvement of the sectorial structure of the national economy give rise to the basic features and requirements of national production intensification and of the entire reproductive process as well. The national economy has reached a level of development at which the continued quantitative growth of production will not satisfy the need for more efficient production or the national economic demand for qualitatively new products and fundamentally new means of labor. The slower growth of the labor force, the higher requirements on the assortment and quality of products, the content of labor and the living conditions of the population, and the technical level and interaction of existing production capacities signify that the main tasks in the improvement of production potential today do not entail the augmentation of production capacities, but their more balanced development, their preparation for the production of qualitatively new types of goods and the incorporation of improved technological processes, machines and mechanisms to guarantee the high quality, necessary composition, durability and reliability of products and the conservation of labor and material resources.

The retooling and remodeling of primarily existing production units should result in the formation of production potential meeting the requirements of the intensification of production, the improvement of the infrastructure and of the working and living conditions of Soviet people, the protection of the environment and so forth.

The requirements and volumes of fixed capital renewal depend on the dimensions of existing production potential and its development. In addition, the renewal volumes depend on the existence of sufficient capital investments, the scales of the production of qualitatively new means of labor and the speed of construction and installation work at existing and new enterprises. Renewal is usually calculated as the ratio of new fixed capital incorporated during a given period to the total amount of fixed capital at the end of this period. This indicator naturally reflects the overall renewal of capital without dividing it into intensive and extensive processes.

The replacement of withdrawn assets with new fixed capital is usually categorized as intensive renewal. The coefficient of intensive renewal is calculated as the ratio of new fixed capital replacing withdrawn means of labor to the total quantity of new fixed capital. In other words, it is the

relationship of withdrawn capital to all new capital incorporated during a specific period. This formal definition of intensive renewal does not take the quality of the new means of labor replacing withdrawn capital into account. In the mass replacement of withdrawn capital, it would be expedient to take the technical level of the new replacement means of labor into account in calculations of the dimensions and patterns of intensive renewal. This presupposes the existence of reliable statistics. When these data do not exist, we must be satisfied with the formal calculation of intensive renewal or seek an indirect approach to the determination of the dimensions of intensive renewal. This probably cannot be done on the level of sectorial calculations. It must apply to cases of the replacement of individual machines or pieces of equipment and the replacement of entire groups of means of labor constituting the production capacities of enterprises. There is only one requirement: The productivity of machines and equipment and the capacities of new enterprises must increase much more quickly than their cost. This requirement should be the standard instrument for the expert appraisal and evaluation of each plan for the construction of new capacities or the remodeling and re-equipping of existing enterprises. "The rapid renewal of the production system with advanced equipment and the widespread incorporation of the most progressive technological processes and flexible production units, allowing for their rapid reorganization for the manufacture of new products and producing the maximum economic and social impact, are of primary significance," the new edition of the CPSU Program says [2].

The timely withdrawal and renewal of capital in accordance with standard service life limits, quality standards for new means of labor meeting social and technical requirements, the methods, organization and duration of capital renewal operations and the presence of labor and material resources for the performance of renewal operations are the elements on which the impact, quality and dimensions of fixed capital renewal depend. All of these elements of renewal require constant and thorough study on the sectorial and national economic levels and in each specific case.

The service life, degree of wear, withdrawal, introduction and growth rate of fixed capital are functionally interrelated in the process of reproduction. The accumulated volume of fixed capital at any given time is the result of the incorporation of quantities of constantly created means of labor, service life limits and withdrawal volumes. Consequently, the need for capital, reflected in incorporation volumes, and the service life objectively represent the governing parameters of fixed capital accumulation. The substantiation of the need for means of labor and the length of their service life is the main, decisive element of the entire concept of fixed capital renewal.

The service life of fixed production capital objectively reflects the speed of the renewal of production potential and is one of the main indicators of fixed capital reproduction. The duration of the productive use, withdrawal and replacement of capital is a characteristic feature of individual elements of capital and of the entire supply of assets. The duration of the reproduction of the entire supply of fixed capital, however, is reflected in a different form as a result of the differing service lives of different assets. It reflects the average cycle of productive use, during which the entire supply of fixed capital is reproduced in a new physical form. In other words, the

entire supply of fixed capital is distinguished by an average service life (it is also the period of reproduction, the period of renewal and the period of accumulation). The duration of fixed capital turnover, representing the period of time during which amortization deductions compensate for the original advanced cost, is another concept employed at present. Turnover duration measures the process of compensation for cost, whereas the average service life measures the process of compensation for use value.

A fundamental premise in the reproduction of fixed capital is the observance of the correspondence of the period of fixed capital turnover to the average service life of the entire supply of means of labor, securing the maximum coordination of natural and cost changes in the means of labor. Of course, the duration of turnover and the service life of fixed capital must always correspond to the level of technical progress and the development of productive forces. The service life of fixed capital is limited by its physical wear and obsolescence. An amortization system and the very process of capital renewal can be organized on the basis of these premises. Measures to create conditions securing the equivalence of the average service life of means of labor and the periods of their cost turnover (amortization periods or standard service lives) aid in the retention of the entire advanced value of fixed capital and limit national economic losses resulting from the depreciation and obsolescence of means of labor.

The premature withdrawal of means of labor--that is, before the end of the standard service life--leads to losses in the form of the incomplete amortization of fixed capital. The use of means of labor beyond their standard service life, on the other hand, leads to national economic losses in the form of lower labor productivity and product quality and higher operational and repair costs. The withdrawal of means of labor in accordance with the standard service life of fixed capital and their replacement with qualitatively new capital will require effective methods of calculating and comparing the standard and actual service lives of fixed capital and methods of balancing fixed capital withdrawal and replacement volumes in terms of cost and physical volume.

Statistics on amortization deductions, the supply of fixed capital, its growth rate and the volume of annual withdrawal provide a basis for the calculation and comparison of the average actual and standard service lives of fixed capital for any report year. Accounts of actual service life can also be kept on the basis of enterprise documents listing written off fixed capital, and this can serve as the basis for the calculation of the averages for ministries and sectors. These records are not being kept at this time, however, and therefore only the first method of determining the average actual service life of fixed capital is feasible.

The standard service life of means of labor (the amortization period) is the established duration of the wear of fixed capital, with optimal consideration for its depreciation and obsolescence. The amortization norm, as a measure of annual wear, is based on the optimal service life of the means of labor and is simultaneously a reliable instrument for the planning of fixed capital reproduction, guaranteeing the accumulation of adequate funds for the financing of capital investments in a planned manner.

**Growth, Withdrawal and Renewal Rates and Service Life
of Fixed Production Capital in Industry***

<u>Indicators</u>	<u>1971-75</u>	<u>1976-80</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Average annual rate of increase in fixed production capital, %	8.0	7.6	7.0	7.0	7.0
Coefficient of withdrawal in last year of period, %	1.6	1.4	1.3	1.2	1.3
Coefficient of withdrawal corresponding to rates of capital increase and existing amortization norms in last year of period, %	1.8	1.8	1.9	1.91	1.91
Coefficient of renewal in last year of period, %	8.0	8.1	7.3	7.3	7.0
Coefficient of intensive renewal in last year of period, %	16.6	16.4	16.6	15.3	17.3
Actual average service life of fixed capital, years	24	25	26.1	27.4	26.5
Standard average service life of fixed capital, years	21	22.8	22.1	22.0	22.0

* Calculated according to data in statistical almanac "Narodnoye khozyaystvo SSSR" [The USSR National Economy] for the corresponding years.

Given the rate of increase in fixed capital in recent years and the actual average service life of withdrawn capital (see table), the proportion accounted for by amortization (for renovation) in gross capital investments is 40-45 percent. This substantial constant source of capital investment financing stabilizes and reinforces the planned basis of the entire reproduction process. This chief merit of amortization, in turn, proves that the amortization system in our country is one of the best and most effective instruments for the planning of fixed capital reproduction. This system is constantly brought in line with the achievements of technical progress through the revision of the service life of fixed capital. The expediency of capital repairs is also connected with the service life of means of labor.

The amortization system in our economy has no equal in terms of its simplicity, flexibility, objectivity and breadth of application. It can be improved constantly and employed in conjunction with the compilation and ratification of each five-year plan by the appropriate services of ministries, departments, associations and enterprises. An instrument to coordinate the amortization system with the achievements of technical progress is obviously needed. The criterion of this correspondence is the approximate equivalence of the service life of withdrawn means of labor and the amortization period. This observation should become an integral part of the statistical and accounting practices of enterprises, associations, ministries and departments. The calculation of the actual and standard service lives of fixed capital could be used as a basis for proposals regarding the revision of amortization norms and for their implementation after the five-year plan has been ratified.

The data in the table indicate that the increasing gap between the actual service life of fixed capital and the amortization period is due to the reduced withdrawal of capital. Under these conditions, the difference between actual and standard service lives cannot serve as sufficient grounds for the revision of amortization norms in industry. This requires the more thorough analysis of the causes of low withdrawal volumes and existing amortization norms. This first calls for the examination of the dimensions of withdrawal, determined by the existing rates of increase in fixed capital and the duration of amortization periods. The table indicates that the coefficients of withdrawal, calculated on the basis of the rate of increase in capital and standard service life, differ little from the actual values of coefficients of withdrawal. When withdrawal dimensions in USSR industry, calculated on the basis of the rate of increase in capital and amortization periods (1.8-1.9 percent), are compared to the dimensions of withdrawal in the U.S. processing industry (4-4.5 percent), the latter are more than twice as high as Soviet levels. Given our rate of increase in fixed capital and capital investment, a withdrawal rate of 3.5-4 percent could be secured, as calculations prove, with a capital service life of 15-17 years. This means that our standard service life of 21-22 years is longer than the overseas one. Consequently, we could say that our amortization norms for fixed capital in industry should be much higher. This naturally gives rise to the question of how closely our amortization norms (or amortization periods) can approximate overseas norms today.

An answer to this question, in our opinion, is provided by an analysis of the state of the specific structure of capital and the duration of the service life of means of labor by structural groups. For example, in the U.S. processing industry the overall standard service life in 1977 was 15.7 years for the means of labor, 23.5 years for buildings and installations and 14.1 years for machines and equipment, whereas the averages in our country in 1983 were 20.6 years, 53 years and 14 years respectively. These data indicate a significant difference between the service lives of buildings and installations: 53 years as compared to 23.5 years. The proportion accounted for by buildings and installations in total fixed capital is almost twice as high in our country as in the United States. Our production buildings and installations are now more capital-intensive and long-lived. This is the result of many factors, especially climatic and economic-geographic conditions [9].

Of course, the length of the service life of industrial buildings and installations is connected with technical achievements in construction, in the construction materials industry and in the chemical industry, but even these achievements could hardly reduce the proportion accounted for by buildings and installations in total fixed production capital by half within the near future. The stepped-up growth of industrial production in the eastern and northern regions of the country in the future naturally cannot promote a decrease in the proportional quantity of buildings and installations in fixed capital and reduce their service life. In view of the objective conditions of the development of production potential in our country, we can assume that the reduction of the service life of fixed capital and the elevation of amortization norms will be accomplished by reducing the service life of production buildings and installations and of equipment for the purpose of accelerating the renewal of the active portion of fixed capital, but not to such a degree that the

entire supply of capital will meet overseas levels. The structure of fixed capital and natural conditions are objective limiting factors.

The standard service lives of the active portion of fixed capital in the USSR and the United States are approximately equal, but our machines and equipment are less advanced and less productive. According to our calculations, capital requirements per unit of output in the USSR, calculated on the basis of national income, are approximately 1.5 times as high as in the United States. Besides this, the actual service life of the active portion of fixed capital in our processing industry is 1.5 times as long as in the United States (18.2 years as compared to 12.3 years), and the rate of increase in active assets in the United States is approximately 3 points higher than in our country--10 percent as compared to 6.9 percent (calculated according to data in [9; 5, pp 47, 145, 546]). Consequently, the achievement of this rate of renewal of the active portion of fixed capital will require a machine-building output approximately 1.5 times as great as the present one.

The reduction of the service life of machines and equipment and the increased volume of their withdrawal in our industry are dictated by the need to renew means of labor for the purpose of enhancing the total productivity (yield, usefulness or results) of all fixed capital. The amounts by which the service life of machines and equipment are reduced and the renewal of fixed capital is accelerated will depend on the capabilities of machine building--that is, on the existence of new progressive means of labor, manufactured on a new technical basis, and on the duration of construction projects. The period of time required to establish production capacities today is almost twice as long as the standard project duration. The reduction of this period by one-third or one-half will accelerate, all other conditions being equal, the growth of the total productivity of existing machines and equipment. This will be accompanied, as calculations indicate, by the slower rise of the output-capital ratio and its subsequent stabilization and reduction.

The results of our investigations of the reproduction of fixed capital indicate that with a rate of capital increase of 2-8 percent, the service life of capital with a withdrawal rate of 2-4 percent will range from 14 to 25 or more years. With a view to the changing technological structure of capital investments and the specific structure of capital, the reduction of the proportion accounted for by construction and installation work in total capital investments from 42 to 32 percent and a corresponding increase in the relative quantity of machines and equipment will result in a maximum service life of 7.5-8 years for machines and equipment. This means that the maximum withdrawal rate of 4 percent with a rate of capital increase of, for example, 6 percent will be achieved when the service life of machines and equipment is 8-9 years instead of the actual 15-18 years. This withdrawal of capital and consequent renewal will be possible if the growth rate of machine-building production is double the present rate. In our opinion, a withdrawal rate of 3.5-4 percent is most probable with a rate of capital increase of 4-6 percent.

The replacement of this withdrawal volume (3.5-4 percent) with a 4-percent rate of capital increase will require higher amortization norms for renovation because existing norms, as the table indicates, can secure the replacement of

withdrawn equipment at a rate not exceeding 2 percent of the value of capital at the beginning of the year with the present rate of annual increase in fixed capital. Of course, annual amortization deductions far exceed the total value of withdrawn capital and the cost of its replacement. But it is significant that the cost of withdrawal and amortization for renovation can only be equal in simple reproduction, whereas in expanded reproduction and the natural movement of capital the relationship between withdrawal and amortization depends on the service life of capital and the rate of capital increase. For example, with a rate of capital increase of 4 percent and a withdrawal rate of 3.5-4 percent, corresponding to a service life of 17-18 years for all capital and of 11-12 years for the active portion, withdrawal should not account for more than 70-72 percent of amortization for renovation. With a higher rate of capital increase this proportion decreases at a rate of 7-8 percent (the current rate) and the same service life and is reduced to 48-50 percent.

These data indicate that existing amortization norms for renovation should be increased by an average of 20-22 percent to secure the necessary capital investment resources for the projected increase in fixed capital withdrawal to 3.5-4 percent a year. Furthermore, most of the increase should be secured by the active portion of fixed capital as a result of the substantial reduction of the service life of machines and equipment and the limitation of expenditures on their capital repair. According to preliminary calculations, the average amortization norm for the capital repair of the active portion of fixed capital could be reduced by 15-18 percent when the norms are revised. Of course, during the process of the reassessment of fixed capital and the revision of standard amortization deductions, these figures concerning the changes in norms for the renovation and the capital repair of equipment could be determined more precisely.

Changes in the reproduction process for the purpose of accelerating the renewal of fixed capital must be closely coordinated with material supply. Given the 4-percent rate of capital increase, the withdrawal of fixed capital at a rate of 3.5-4 percent is made possible, as calculations show, by the acceleration of the current growth rate (1.5-1.6 times [5, p 121] over 5 years)* of the output of the means of labor by a factor of 1.4-1.5.

Capital investment resources are another factor limiting this increase in fixed capital withdrawal. The replacement of withdrawn equipment will require almost triple the current capital investments. The radical redirection of capital investment into existing production units will be required. Given the large quantity of construction work in progress and the corresponding construction base, the redirection of capital investments into existing production through the limitation of new construction will require a long time. Calculations show that this will take at least 5-7 years.

Today the reproductive structure of capital investments is a means of redirecting investments into existing production. It can serve as an effective instrument for the planning of fixed capital withdrawal and replacement at existing

* An increase of 40-45 percent in the output of machine building is envisaged in the Basic Directions for 1986-1990.

enterprises because it gives planning and administrative bodies an opportunity to plan the reproduction of fixed capital as a result of new construction and existing production as a single entity. It allows for the improvement of the organizational structure of capital construction and the improvement of the administrative mechanism to secure the quicker and more effective use of capital investments.

Excluding expenditures on equipment not included in construction estimates and on exploratory drilling for oil, gas and hot springs, capital investments for the 1980-1983 period were distributed in the following manner: 35.8-36.3 percent of the total for new construction, 31.8-28.9 percent for enlargement and maintenance, and 32.4-34.8 percent for remodeling and retooling [4, p 360]. The observance of capital reproduction norms--that is, capital renewal in accordance with existing service life standards--would change the reproductive structure of capital investments considerably, as calculations prove (for the calculation method, see [8]): No more than 20 percent of the annual sum of capital invested in production should be allocated for new construction, up to 23 percent for enlargement and maintenance, and up to 57 percent for remodeling and retooling. This normative structure sets the investment saturation limits for existing production on the basis of existing (and requiring clarification) standard service lives of fixed assets and the capital withdrawal and renewal rates dictated by these service lives. To secure a capital withdrawal rate of 3.5-4 percent in the future, the reproductive structure should be geared even more to higher expenditures on existing production. This could be used as the transitional structure. Proportional funds for existing production, as Comrade M. S. Gorbachev said at the CPSU Central Committee conference on technical progress on 11 June 1985, "should be increased in the next few years from one-third to at least one-half of the total" [1].

To secure the effective reorganization of enterprises, the full set of pre-planning and planning operations should be conducted for each form of reproduction. In particular, these operations should be intensified or even reorganized in remodeling and retooling. These now demand as much attention from project planners and surveyors as enlargement and new construction. It is sometimes more difficult to incorporate new equipment and new technological processes in existing production than to design and build a new enterprise. It is just as difficult to secure the orderly and efficient work of the reorganized production unit with related enterprises without the pre-planning stage.

Pre-planning documents (sectorial development and distribution plans, special programs, substantiating materials, technical and economic validation and calculations), plans for the retooling and remodeling of enterprises and plans for the organization of labor should reflect and take into account, in addition to technical and economic factors, intraorganizational, sectorial and intersectorial ties for the provision of the re-equipped enterprises with labor and material resources and the sale of the finished product. Planning documents must include information about the quantity, cost and main technical parameters of withdrawn and new equipment and of old and new technological processes so that subsequent remodeling and retooling title lists and plans will contain all of the necessary information for the planning of capital investments, construction, capital renewal, material and technical supply and financing.

Project planning organizations contracted to perform the investigative planning work for the retooling and remodeling of existing enterprises should have specialized subdivisions and be responsible for any change in the projected production capacities on which designs are based. For the avoidance of subjectivism and departmental biases, the so-called "self-determination" of production capacities by enterprises must not be allowed in economic practices and planning. A single set of procedures should be established for all parties involved in the planning and performance of enterprise retooling and remodeling projects, stipulating the existence of a complete set of approved project planning documents for any project with an estimated cost of, for instance, 100,000 rubles or more, regardless of the sources of financing. The capacities stipulated in the plan are the major feature of the enterprise on which the planning of production output is based. The enterprise develops and uses projected production capacities. These capacities can change only as a result of a new plan for retooling or new construction.

The impact of the retooling and remodeling of existing enterprises depends on the quality of this work and on the withdrawal of obsolete technology, machines and equipment and their replacement with new technological processes and means of labor--that is, the elevation of the technical level of plans. In our opinion, the improvement of remodeling and retooling procedures will require the stronger pre-planning substantiation and design of this work and the planning of retooling and remodeling project volumes for each ministry and department. Under these conditions, it will be possible and necessary to plan fixed capital withdrawal and replacement for each ministry and department on the basis of planning estimates. When the distribution of equipment is being planned, existing enterprises should be given priority.

To raise the technical level of re-equipped and remodeled enterprises and to accelerate this work, it would be expedient to establish flexible production systems facilitating the replacement and renewal of technological links and individual machines and to draw up standard designs for the planning and construction of building and installation modules, the performance of which could easily be included in annual operational volumes and would not promote the increased use of costly materials. Finally, the presence of new equipment and new forms of technology and their accelerated incorporation are the main considerations. Fundamentally new equipment makes its appearance every 12-13 years [4]. The conservation of social labor demands that the rates of equipment renewal be coordinated with the rates of technical progress--that is, the service life of machines and equipment should be equivalent to the period required for the appearance of fundamentally new equipment. The satisfaction of this requirement is also connected with the need to accelerate the growth of machine-building output and reduce the amount of time required for the establishment of production capacities in all stages of reproduction: the planning, construction and development of capacities.

BIBLIOGRAPHY

1. Gorbachev, M. S., "A Fundamental Issue of Party Economic Policy. Report Presented at the CPSU Central Committee Conference on the Acceleration of Scientific and Technical Progress on 11 June 1985," Moscow, Politizdat, 1985, pp 11-12.

2. "CPSU Program (New Edition)," Moscow, Politizdat, 1986, p 27.
3. "Basic Directions of Economic and Social Development for 1986-1990 and the Period up to 2000," Moscow, Politizdat, 1986, p 19.
4. PRAVDA, 12 November 1984.
5. "Narodnoye khozyaystvo SSSR v 1983 g." [The USSR National Economy in 1983], Moscow, Finansy i statistika, 1984, pp 47, 384, 385.
6. "Narodnoye khozyaystvo SSSR v 1972 g.," Moscow, Statistika, 1973, pp 61-62.
7. "Narodnoye khozyaystvo SSSR v 1984 g.," Moscow, Finansy i statistika, 1985, pp 138, 150, 157.
8. PLANOVOYE KHOZYAYSTVO, 1984, No 8.
9. "Subject Statistics, 1977. Census of Manufactures," U.S. Department of Commerce, Bureau of the Census, 1977, vol I, p 5-4.

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INVESTMENT, PRICES, BUDGET AND FINANCE

INTENSIFICATION, ECONOMIC GROWTH RELATIONSHIP ANALYZED

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 6, Jun 86 pp 63-72

[Article by D. Chernikov, doctor of economic sciences: "Intensification and the Proportionality of Economic Growth"]

[Text] The transition to the intensive type of economic development is an objective necessity. The capital-conserving form and the capital-intensive form of scientific-technical progress. Growth rates and the national-economic proportions under the conditions of intensification.

Lying at the basis of the party's strategic course for improving socialism and for carrying out the further movement of Soviet society toward communism is the concept developed by the April 1985 Plenum of the CPSU Central Committee — the concept of the acceleration of the country's socioeconomic development. The most important principles in this concept have been developed and completely substantiated in the materials of the 27th CPSU Congress.

The acceleration of our country's socioeconomic development presupposes the carrying out of a major turn toward the intensification of production, and presupposes the reorientation of every enterprise and every branch toward the complete use of the qualitative growth factors.

In order to ascertain the typical features of the intensification process it is necessary to study the natural laws that typify the extensive and intensive types of economic development.

In the real process of expanded socialist reproduction one usually does not encounter purely extensive or intensive economic growth. Both types coexist, combine and intersect with one another, and fuse into one another.

However, for purposes of analyzing and administering the process of economic development, it is necessary to differentiate between the extensive type and the intensive. Depending upon which of them predominates at the particular moment, one can speak of the primarily extensive or intensive type of economic growth. Thus, if, by means of an increase in the effectiveness of socialist

production one obtains more than 50 percent of the increase in the output, then the intensive type predominates; if less, the extensive.

Another important factor is the choice of the specific method that would make it possible to differentiate them quantitatively. In the question the economists have various points of view. For a long time the dominant position was the one according to which the part of increase in output which was obtained as a result of the increase in labor productivity was equated with the share of the intensive type of economic growth. Actually, in the increase in labor productivity one sees the manifestation of the increase in the effectiveness of production. But, nevertheless, the equating of the increase in output that is obtained as a result of the increase in labor productivity with the share of the intensive type of economic growth is, in our opinion, incorrect, because if one recognizes this treatment as being true, then it is possible to sacrifice the effectiveness of the labor that has been embodied in the fixed production assets, for the sake of the effectiveness of live labor.

Lying at the basis of the differentiation between the extensive and intensive types of economic growth is the correlation between the capital-intensive form and the capital-conserving form of scientific-technical progress. Thus, the intensive type of economic growth is linked with the capital-conserving form of scientific-technical progress, inasmuch as it is precisely that form that is typified by a saving both of live and embodied labor, while the extensive type is linked with the capital-intensive form of scientific-technical progress and with the increase in the number of persons employed in material production.

The reasons for the transition to the chiefly intensive type of economic growth is frequently explained by the narrowing of the extensive sources of development. But this explanation is insufficient: the narrowing of the extensive sources of growth in the final analysis was influenced by more deeply underlying factors -- shifts in the reproduction and branch structure of the economy.

The possibility of exerting an active effect upon the rates and proportions of economic growth is linked with the planned determination of the size of the norm for the production capital investments and trends in scientific-technical progress.

Under socialism the use of the extensive and intensive types of economic growth is determined by the content of social ownership of the means of production, and it presupposes the complete employment rate of the able-bodied population and the increase in the consumption resources per capita of population. Under these conditions the minimum limit for the norm of production capital investments is characterized by that level of investments which makes it possible to assure the complete employment rate of the able-bodied population at least with fixed capital intensity of labor. But the maximum limit is determined by those conditions under which the absolute increase in the production capital investments, while approaching the absolute increase in the final social product, nevertheless does not lower the level of the consumption resources per capita of population. The difference between

the maximum and minimum limits of the norm of production capital investments forms the range of its possible change.

The inclusion of scientific-technical progress as part of the economic growth factors is caused by the need for the expansion and qualitative improvement of the production potential, the increase in the rates of economic development, and the increase in the consumption resources per capita of population.

At the initial stage, which corresponds to the period of the industrialization both of the national economy as a whole and the individual branches and production entities, scientific-technical progress is chiefly capital-intensive, since it exerts an effect not only on the increase in the rates of economic growth, but also on the replacement of live labor by embodied. As a result, the productivity of labor grows more slowly than its capital intensity. There is also an increase in the materials-intensity of output as a consequence of the forced involvement of the primary natural resources in economic circulation. The assets-conserving form of scientific-technical progress is realized as a result of the renovation of the production apparatus, when the means of labor which are replacing the manual labor begin to be crowded out by newer, more improved ones. The introduction of new technology also contributes to the reduction of the materials-intensity of the output. Prior to that, the process of economic growth is influenced only by an increase in the number of persons employed, and by the capital-intensive and materials-intensive forms of scientific-technical progress.

After the appearance of the resource-conserving forms, throughout a definite period (until, by means of the more progressive means of labor, there is a renovation of at least half of the production apparatus), scientific-technical progress continues to be chiefly capital-intensive and materials-intensive.

Under these conditions the increase in the economic growth rates is linked with an increase in the norm of production capital investments and with their redistribution into the investment sector of the national economy.

A steady increase in the norm of production capital investments leads to the gradual drawing closer together with its upper limit and makes this method of expanding production less desirable.

The increasing undesirability of continuing the process of expanded reproduction on the basis of the chiefly extensive type of economic growth, and the gradual formation of the prerequisites for the mass renovation of the existing production apparatus, create conditions for the transition to the stage of intensification. The material basis of this process is the slowing down of the dynamics of the fixed production assets by means of the acceleration of the withdrawal of the obsolete and obsolescent means of labor and the improvement in the quality of the types of technology to be introduced. The overall reduction of the materials-intensity of output is influenced both by a change in the structure of social production, and by the introduction of materials-conserving technological processes. Actually, as the share of the base branches of industry increases, the satisfying of their needs for the traditional production resources is limited to the opportunities for the additional involvement of the latter, and this makes inevitable the

change in the structural policy that has developed. There is an increase in the importance of the extension of progressive technological schemes into all links of the national economy and the elimination on that basis of the excess need for raw and other materials, fuel, and energy. This structural shift can be realized only on the basis of the change of the priorities from the forced development of individual links of the economy to the mass renovation of the production apparatus throughout the national economy.

When determining the necessary scale for the intensification of social production, it is necessary to determine the complete set of socioeconomic requirements for the rates of economic growth and to evaluate the scale of the narrowing that is expected in the long-term view in the sources of extensive development.

The limits within which the rates of economic growth can change are determined rather unambiguously. From the point of view of the socioeconomic limitations, the minimum growth rate for the national income is determined by the tendencies that have developed under the conditions of the payment of labor and the distribution from social consumption funds, and by the stabilization of the achieved volumes of activation of housing. The maximum is determined by the necessity of achieving the indicators of the efficient consumer budget.

The low dynamics of production capital investments are influenced by the economic growth rates that do not make it possible to guarantee an increase in the consumption resources at the minimally admissible level. Excessively high dynamics of production capital investments lead to the same result, since, those dynamics do not cause an adequate increase in the economic growth rates or increase in the consumption resources.

Computations made at NIEI [Scientific-Research Economics Institute], under USSR Gosplan, indicate that, with a consideration of the natural laws underlying expanded reproduction which are typical of the first half of the 1980's, the minimum limit of the average annual rates of growth in the used national income is equal to approximately 1.5 percent, and the maximum is 6.0 percent. It is precisely within these limits that one can search for the admissible resolutions in the area of the economic growth rates.

After formulating the complete series of large-scale socioeconomic measures for the 12th Five-Year Plan and the long-term future and after analyzing the unfavorable tendencies and difficulties that occurred in the 1970's and early 1980's in the development of the national economy, the party made a conclusion concerning the need for a considerable increase in the economic growth rates.

The 27th CPSU Congress planned to increase the country's national income that is to be used for consumption and accumulation during the years of the 12th Five-Year Plan by 19-22 percent, and as a whole for the period until the year 200, to almost double that figure.

When speaking about the acceleration of socioeconomic development, it is necessary to emphasize that acceleration cannot be summarized simply as .pa

increasing the growth rates of the national income to be used for consumption and accumulation.

First, as the social production intensifies, the growth rates for the output of individual branches and the national economy as a whole characterize less and less the real achievements in the economic area. The fact of the matter is that the long-term dynamics of the generalizing value indicators reflects, essentially speaking, the changes in the volume of involvement of production resources in economic turnover. According to its material-substantive composition, the final social product and national income are formed basically by the output of the machine-building, agroindustrial, and construction complexes, and the complex for the production of manufactured consumer goods. That output (except for the agroindustrial) under the conditions of the intensification of social production is renewed rather quickly. Also, the prices for the new output reflect, in the final analysis, not the change of its functional characteristics, but the expenditures of intermediate output and its prices, and this makes the volumes of the production of various years, even those that have been computed in comparable prices, practically incomparable. A change in the structure of production in favor of the new output that guarantees an analogous effect in consumption with lesser expenditures for producing it will contribute to a definite slowing down of the dynamics of the generalizing value indicators.

Secondly, it is necessary to take into consideration the structural shifts in the national economy. An analysis that has been carried out indicates that in the long-term period there will be a slowing down of the macrostructural shifts, as well as a change in the direction of their influence upon the effectiveness of social production. Thus, during recent decades the shifts in the structure of material production were determined by the preferential development of the base branches of industry, by the major reorganization of the fuel and energy balance sheet, and by the mass exodus of the labor resources from agriculture into the industrial sector of the economy. All this to a considerable degree contributed to the increase in the effectiveness of social production. But in the long-term period the growth rates of industrial production will come closer to the growth rates for such capital-intensive branches as agriculture and the branches of the production infrastructure. This is explained by the fact that the present-day conditions are typified by a shifting of the center of gravity in carrying out the progressive structural shifts from the branches in the national economy to individual subbranches and production entities that act as the catalysts of scientific-technical progress, the dynamics of which, by way of a complicated chain of reproduction ties, predetermines the qualitative changes in the economy. A factor of especially great importance is the improvement of the real structural supplementing both of the accumulation and capital investments fund, and of the consumption fund. The growth rates for the generalizing value indicator — national income — should be increased only so long as the possibility is retained for assuring the dynamically balanced development of the national economy. Otherwise the increase in the economic growth rates will not lead to an increase in the real final results in the national economy and at the same time will cause a substantial overexpenditure of the production resources being used, will cancel the expected social benefit, will intensify the disbalance in the development of the national economy, and will

hinder the activating of the effect of the financial levers upon increasing the effectiveness of social production.

The 27th CPSU Congress directed attention to the need to improve the real supplementing of the national income. With respect to the accumulation and capital investments fund, the task posed was to guarantee, beginning with the 12th Five-Year Plan, the construction and activation of projects within the normative deadlines, to achieve a considerable reduction in the number of projects being constructed simultaneously, to bring the volumes of the construction backlog and of uncompleted construction to the normative level, and to reduce substantially the reserves of uninstalled equipment. The consumption fund is supposed to guarantee the satisfying of various requests by Soviet citizens for fabrics, clothing, shoes, articles intended for cultural, everyday, and household use, and other commodities with a mass demand.

Thus, a definite increase in the growth rates of the national income, with a cardinal improvement of the real supplementing of that income, constitute very important manifestations of the acceleration of the dynamism of economic development on the basis of the complete intensification of social production.

Computations carried out at NIEI, under USSR Gosplan, indicate that the type of economic growth that is still being carried out in our country is the extensive type. The share of the intensive factors in the increase in national income was as follows: in 1961-1965, 34 percent; in 1966-1970, 40 percent; in 1971-1975, 27 percent; in 1976-1980, 23 percent; in 1981-1985, 26 percent. And if the nature of our country's economic development is retained in the future, the average annual rates of increase in the unused national income by the year 2000 will be reduced to approximately one-half, as compared with the 11th Five-Year Plan. The narrowing of the extensive sources of development and the tasks posed by the party for raising the average annual rates of increase of the national income to 3.5-4.0 percent in the 12th Five-Year Plan and to an average of 4.7 percent during the next 15 years indicate the necessary scope of the intensification of social production.

The transition to the chiefly intensive type of economic growth cannot be carried out immediately. Taking into consideration the urgent necessity for the substantial acceleration of the process of renovating the fixed production assets, the considerable tying down of capital investments in projects that have already been begun, and the need for carrying out a profound shift in structural policy, this transition will be carried out over the period of a number of years. However, the course aimed at the intensification of production will become more purposeful than has been the situation previously. As is well known, the increase in the effectiveness of social production is carried out primarily by means of the economizing of live labor, it influences substantial changes in the technological schemes in production, and leads to the more efficient use of the raw-material and fuel-and-energy resources. The implementation of the material-conserving and energy-conserving trends in scientific-technical progress, like the measures for economizing live labor, rests upon the increase in fixed production assets. Fixed assets, thus, replace not only the labor resources, but also the material resources. Therefore the greatest opportunities for increasing the effectiveness of

social production at the initial stage of intensification of social production are linked with the labor-conserving, material-conserving, and energy-conserving trends in scientific-technical progress. This, however, does not deny the need for increasing the return from the fixed production assets.

In the 12th Five-Year Plan it will be necessary to increase labor productivity for the national economy as a whole by 20-23 percent, including 23-25 percent in industry. This will make it possible to obtain, by means of an increase in labor productivity, the entire increase in the production of output in industry and agriculture, as well as the volume of shipments on rail transport and operations in construction. Specific steps have been defined for intensifying economy measures. In 1990, as compared with 1985, it is planned to reduce the material-intensity of social product by 4-5 percent; to reduce the energy-intensity of national income by 7-9 percent; and metal-intensity, by 13-15 percent.

In the report on the Basic Directions at the 27th CPSU Congress it was noted that, by means of the conversion of economy into the basic source for satisfying the additional needs for fuel and for raw and other materials, within the next five years it is planned to guarantee 60-65 percent of the increase in the need for the most important resources. As a result, the economizing of the material expenditures for the the national economy as a whole in 1990 will double. Our country has never known previously such a scope in resource conservation. This scope reflects the objective needs at the present stage in our development.

An important role in increasing the effectiveness of social production is assigned to the intensive use of the created production potential. Therefore the task has been assigned to guarantee the maximum work load placed upon the equipment and to increase substantially the shift factor in its operation.

A factor of primary importance for switching the economy over to methods of primarily intensive development will be the achievement of fundamentally new technological schemes and the renovation of the production apparatus of the entire national economy by means of the modernization of machine-building and the incorporation of the latest scientific-technical achievements in the machines and equipment. At the first stage of the intensification of social production, an important role is assigned to increasing the labor, technological, and state discipline, to increasing responsibility and a conscientious attitude to one's job.

The deepening of the intensification of social production, the increasing of the degree of balance in economic growth, and the improvement and further buildup of the production potential are based on the expansion of the investment capabilities of the national economy.

In the 12th Five-Year Plan, it is planned to increase capital investments in the national economy by 18-22 percent. This volume of investments has been balanced with the scale for increasing the production of construction materials, the capacities of the construction-and-installation organizations, and the shipments of equipment. The planned volume of capital investments .pa

makes it possible to overcome a tendency that has manifested itself in the past -- the tendency toward the slowing down of their growth.

An economic maneuver that is aimed at slowing down the dynamics of capital investments for purposes of shifting the center of gravity from their quantitative buildup to raising the qualitative level has been planned since the middle of the 1970's. Thus, whereas the average annual rates of increase in production capital investments in 1966-1970 came to 7.55 percent and in 1971-1975 to 8.1 percent, in 1976-1980 they fell to 3.55 percent and in 1981-1984 to 3.3 percent. As has been shown by an analysis, the course taken toward the intensification of the investment process by means of the guaranteeing of the balancing of the dynamics of capital investments with the capabilities for their material-substantive cover could not be completely implemented. Simultaneously with the slowing down of the dynamics of capital investments there was a substantial increase in the volume of new construction. Consequently, the ratio of the uncompleted construction to the annual volume of production capital investments increased from 75 percent in 1975 to 87 percent in 1980. That process came somewhat to a stop only in recent years (in 1984 that ratio came to 78 percent). Therefore the task of guaranteeing the dynamic balancing of the process of capital construction on the basis of the reduction of the cost of a unit of capacity to be introduced and the concentration of capital investments continues to be a vitally important one.

The breaking of the tendency toward the slowing down of the dynamics of capital investments, which break is planned for the 12th Five-Year Plan, and the maintaining of a sufficiently high level of investment activity are of fundamental importance for carrying out an effective structural policy. Consideration is also taken of the need to carry out new construction in the branches that embody the most important achievements of scientific-technical progress (electronics, nuclear energy engineering, complete automation, production of new materials, biotechnology). In addition, there continues to be a need for major capital investments in the branches with a high and growing capital-intensity of production (agriculture and the fuel-and-energy complex), and this is primarily linked with the fulfillment of the food and energy programs.

The mobilization of the available reserves for increasing the effectiveness of the use of the production potential also requires capital investments, primarily for guaranteeing the normal functioning of the related branches.

And, finally, there has been an increase in the volume and share of capital investments channeled into the replacement of fixed assets that have been withdrawn (even if one retains their excessive service lives that had developed). In the 1960's and 1970's the scope of investment activity was especially broad and comparable with the dynamics of the capital investments in the near future. This inevitably predetermines the considerable scope of the withdrawal of fixed assets in the long-range future.

Investment policy, under conditions of the changeover of the economy to methods of chiefly intensive development, has been called upon to guarantee the coordination of the processes of reproduction of the fixed assets and

labor resources, and to balance the reproduction of the raw-material and fuel-and-energy resources with the needs of the national economy.

The proportion that has been developing between the dynamics of the fixed production assets and the labor resources exerts a substantial effect upon the overall rate of scientific-technical progress and the correlations between its major forms.

With the capital-intensive form of scientific-technical progress, when there is an increase in the rate of increase in the capital-labor ratio, there is a slowing down of the increase in the growth rates for labor productivity. This is linked with the fact that the growth of fixed assets in this instance not only contributes to an increase in the production of output, but also compensates for the relative replacement of live labor by embodied labor. The dynamics of capital-conserving scientific-technical progress does not depend at all upon the growth rates of the capital-labor ratio, but, rather, is predetermined by the intensity of the renovation of the production apparatus on the basis of effective technology and technological schemes. Hence it follows that, when there are stable dynamics in the activation of fixed assets, with an increase in the rate of increase in the capital-labor ratio, all other conditions being equal, there is an increase in the share of the capital-intensive form and a reduction in the capital-conserving form of scientific-technical progress. The dependences among these forms and the factors influencing their dynamics, which have been typical of the Soviet economy in 1961-1985, attest to the fact that, under the conditions of the course that has been taken toward the intensification of social production, in order to achieve the balancing of the factors in the national economy it is necessary to reduce the excessive gap between the rates of increase of labor productivity and the capital-labor ratio.

Unfortunately, in the past decade and a half there has been a failure to guarantee a change in that proportion which corresponds to the requirements of the intensification of social production. That has led to a buildup of the elements of an imbalance among the factors in the national economy, as a consequence of the slowdown in the process of withdrawal of obsolescent technology and the prolongation of the service life of the fixed assets, which was accompanied by the acceleration of the growth rates of the capital-labor ratio in the first half of the 1970's and by the reduction of the dynamics of the activation of means of labor subsequently. Thus, the average service life of the positive part of the fixed production assets in 1971-1984 increased from 12.5 to 14.3 years, and the negative, from 36.6 to 43.4 years. In addition, in the first half of the 1970's there was an acceleration of the growth rates of the capital-labor ratio (from 7.2 percent in 1966-1970 to 7.6 in 1971-1975), and subsequently those rates dropped (to 6.3 percent in 1976-1980 and 6.2 percent in 1981-1984), not as a result of the acceleration of the withdrawal of obsolescent technology, but rather as a consequence of the slowdown in the activation of fixed production assets.

This change in the proportion influenced the lack of complete filling of a considerable number of work stations and predetermined the shortage of labor resources that developed even under the conditions of a favorable demographic situation.

The lack of filling of the work stations, in its turn, causes increased personnel turnover and has a negative effect upon the intensity of labor, and, in the final analysis, hinders the intensification of social production. Therefore the guaranteeing of the precise coordination of the processes of reproduction of the fixed assets and labor resources, under present-day conditions, takes on an especially vital importance, and the optimizing of the proportion that has developed between the dynamics of labor productivity and the capital-labor ratio acts as one of the most important socioeconomic problems. Its resolution will be promoted by the mass withdrawal of the obsolescent means of labor from production and by the renovation of the production apparatus by means of the broad introduction of advanced technology and the most progressive technological processes and flexible production entities. For this purpose, the task has been posed as early as the 12th Five-Year Plan to renovate by more than one-third the positive part of the production assets, and at least to double, as compared with the 11th Five-Year Plan, the volumes of withdrawal of obsolete assets.

The necessary changes in the reproduction structure of capital investments are inseparable from the increase in the role of the technical re-equipping and remodeling of the existing enterprises. Our country has already accumulated a considerable amount of experience in remodeling existing enterprises without a substantial involvement of additional capital investments. Nevertheless it must be admitted that the opportunities for this major method of raising the technical level of production are still being used in far from a complete manner. Frequently a decision concerning the carrying out of technical re-equipping by means of the modernization of existing enterprises is made without a careful study of the effect that this form of reproduction will have upon the results of economic activity. There is a pressing need to raise the priority level of the expenditures to replace the obsolescent technology in the overall expenditures for the intensification of existing production. Computations indicate that a one-percent increase in the share of equipment in the overall volume of capital investments leads to an additional production of output in the amount of 7-8 billion rubles.

In order to raise the level of balance among the production factors, it is also necessary to have the first-priority channeling of capital investments into the branches that create the conditions for the accelerated elimination of relatively unskilled manual labor, the creation of an effective mechanism for releasing workers as a result of scientific-technical progress, and the improvement of the use of manpower.

In addition, in the long-term period it is extremely important to guarantee the conformity between the increase in the fixed assets and the labor resources in the territorial cross-section. Corresponding to the intensification of social production is the change in the developed nature of the interrelations that the capital-forming branches have with the raw-material and fuel-and-energy branches. This presupposes the existence of priority in the allocation of capital investments in machine-building for purposes of guaranteeing the accelerated replacement of the means of labor in the branches that produce construction materials and in the fuel-and-energy complex, and the implementation in them of the resource-conserving trends in

scientific-technical progress. As a result of this structural shift in the distribution of the capital investments there must be a change in the intensity of the interbranch flows that connect to one another the fuel-and-energy complex, the branches that produce raw and other materials, and machine-building and construction, and this will make it possible to overcome the shortage of raw-material and fuel-and-energy resources.

As has been shown by the analysis, in the national economy of our country the structural changes in the interrelations between the extractive branches and the branches for the primary processing of natural resources are still being carried out at an insufficiently active rate. The expenditures of fuel and energy, ferrous and nonferrous metals, as well as lumber, building materials of mineral origin, and chemical products in the sphere of their processing and use, in a number of instances remain at a high level, and this is accompanied by the use of material-intensive technological processes and equipment.

The greatest strain in the structure of interrelationships among the branches that form the rates of economic growth develops along the basic interbranch flows: for fuel and electrical energy arriving at the raw-material branches of industry; for construction materials arriving at machine-building and construction. This leads to a reduction in the growth rates for output in the capital-forming branches and, all other conditions being equal, this predetermines the slowdown in the withdrawal of the obsolete technology and creates the prerequisites for a worsening of the correlation between the capital-conserving form and the capital-intensive form of scientific-technical progress and to the reduction of the intensive sources of development. In addition, the slowing down of the process of re-equipping of the functioning production apparatus prevents the introduction on a broad scale of material-conserving and energy-conserving technological schemes, and this causes an additional need for natural resources and contributes to the acceleration of the dynamics of the extensive factors.

The excessively large percentage of the industrial branches involved in the extraction and primary processing of resources has prevented the proper increase in the share of the capital-forming branches, and primarily machine-building, in the volume of production capital investments. Thus, whereas the share of machine-building in the volume of production capital investments from 1960 to 1970 increased from 7.8 to 10.8 percent, by 1980 that share increased only to 11.9 percent, and by 1984 it dropped somewhat, amounting to 11.8 percent. Machine-building under these conditions proved to be technically insufficiently prepared for the broad introduction into the national economy of the resource-conserving trends in scientific-technical progress. As a result the measures that were undertaken in the past 15-20 years, which stipulate a reduction in the strain in providing the national economy with raw-material and fuel-and-energy resources, were not always implemented consistently.

In this regard, the materials of the 27th CPSU Congress posed the task of accelerating the increase in capital investments channeled into machine-building. By 1986 the capital investments in machine-building had increased, as compared with 1985, by more than 30 percent, including 55 percent in instrument-building and 42 percent in machine-tool building. There has been a

considerable increase in the capital investments in the electrical-engineering industry and in chemical and petroleum machine-building. During the five-year period as a whole, 1.8 times more capital investments have been allocated for renovating the branch than during the previous five years. On the basis of an increase in the volume of capital investments channeled into the development of the machine-building complex, during the years of the 12th Five-Year Plan the average annual rates of increase in its output will exceed by a factor of 1.9 the growth rates for industrial output as a whole, and the renovation of the positive part of its fixed production assets will be increased to 10-12 percent annually.

A considerable amount of attention is also being paid to raising the technical level of machine-building output. In the 12th Five-Year Plan it has been decided to reduce by three-fourths to two-thirds the periods of time required to develop and assimilate new technology, and to achieve a situation in which all the types of technology which are to be newly assimilated have a productivity and reliability which exceed by at least a factor of 1.5-2 those features in similar output being produced.

Serious structural shifts must occur in the makeup of the branches that produce construction materials, there will be an improvement in the quality features of the materials being employed, and a reduction in their expenditure per unit of output.

A substantial reorganization is planned in the structure of the fuel-and-energy complex. The strategic line of satisfying the needs of the national economy for fuel-and-energy resources consists in the preferential increase in the production of coal and nuclear energy. In the near future an important role in changing the fuel-and-energy balance sheet will belong to gas. This will make it possible to achieve a gradual reduction in the share of petroleum in energy consumption and to increase its use as a raw material for chemical and microbiological production entities. A large amount of importance in implementing the strategic line aimed at developing the fuel-and-energy complex belongs to raising the level of the extractability of the primary fuel from the mineral resources and to raising the efficiency in energy use by the consumers. Technical progress in the fuel-and-energy complex will be aimed at the introduction of new, highly-effective technological processes which will make it possible to extract the petroleum, gas, and coal more completely, to reduce the specific expenditures of fuel on the basis of an increase in the individual capacities of the units in electrical engineering and new, nonmachine methods of transforming the primary types of energy into electrical energy, and to create powerful long-distance electrical transmission lines. Something that will be an innovation in energy engineering is the use of nuclear energy in heat supply (at the present time, approximately 30 percent of the fuel-and-energy resources is consumed in that sphere).

Thus, the consistent implementation of the material-conserving and energy-conserving trends in scientific-technical progress must guarantee the systematic reduction in the share of the material expenditures in the value of the output being produced. The economizing of the most important types of raw-material and fuel-and-energy resources is the decisive factor for satisfying the need for them in the national economy. In the foreseeable

future, the planned carrying out of the material-conserving function of scientific-technical progress will become an important factor for reducing the consumption of raw-material and fuel-and-energy resources, and this, in its turn, will exert a fundamental effect upon the reduction of capital-intensity in the national economy, inasmuch as raw and other materials, fuel, and energy are produced in the most capital-intensive branches.

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CSO: 1820/194

INVESTMENT, PRICES, BUDGET AND FINANCE

USSR GOSBANK CHAIRMAN INTERVIEWED ON CREDIT REFORM

Moscow IZVESTIYA in Russian 7 Aug 86 p 2

[Interview by R. Lynev with USSR Gosbank Board Chairman V. Dementsev
"Credit for Reconstruction"; date and place not specified]

[Text] The theme of our conversation with USSR Gosbank Board Chairman Viktor Vladimirovich Dementsev was brought out immediately: the role of credit in reconstruction of the economy. But how should one approach this important topic? After all, for many of our readers it probably seems remote, complex, and chiefly--has little to do with their interests. Probably not everyone even knows the difference between, for example, the Ministry of Finance [Minfin] and USSR Gosbank.

"Yes, there may be such people," mused the chairman, who, incidentally, had worked at USSR Minfin for many years.

[Question] There may be, and judging from the letters to IZVESTIYA, there are.

[Answer] But it's very simple. Minfin provides financing from the state budget and it is nonreturnable; but we provide funds from bank assets--for a time only, and they are returned to us with interest. And that is credit, or loans. For what purposes are they used? For satisfying the production needs which continuously arise among our clients: the industrial branches and enterprises, the agroindustrial complex, and trade.

[Question] And can you tell us the amount of borrowed capital presently in circulation?

[Answer] It amounts to more than 520 billion rubles, which is about 100 billion rubles more than the country's annual receipts to the state budget. And if one considers that borrowed capital is the most mobile part of finance--it turns over on the average 5-6 times per year--then it is not hard to figure out what an enormous sum this is and to understand the exceptionally large role of credit in the economy. And this role must increase along with the growth in commodity-monetary relationships.

[Question] It must! However, it was noted at the party congress that the influence of the financial and credit mechanism on the economy has declined in recent years, and that credit has lost its true purpose. Please explain how this was revealed; and, is it a good thing that many of our enterprises are living a "life of borrowing", and are clearly living beyond their means?

[Answer] That's not a simple question. Negative phenomena in the economy, the causes for which were thoroughly analyzed at the congress, have led in particular to a situation in which enterprises were accumulating abnormal reserves of raw material, semi-finished goods, and products not shipped out. There was a growing pool of equipment acquired, so to speak, as a reserve. All of this led to unjustified expenditures. And many enterprises did not have sufficient assets for their own needs--neither budgeted assets, nor from their own profits. And so they appealed to us for loans. On the average more than half the assets which provide the function of working capital were formed on the basis of credits. And the administrators of a number of enterprises--especially the agricultural enterprises to whom loans are offered at exceptionally preferential rates, at low interest and for a long period--became accustomed to this financial situation, as with respect to subsidies from the state budget, and forgot the difference between them. For them extending the terms of their loans virtually became the norm. And almost any overdue loan is a signal of losses, of the fact that the loans have not produced the proper results. The overall result of such practice was that investments on credit outstripped growth of production, and the turnover of borrowed capital slowed down.

[Question] And so, there was clearly an excessive accumulation of fixed assets at the enterprises (machine tools, for example), excess working capital (stocks of raw materials and supplies) and, finally, excessive loans. Presently the economy is starting to slowly recover, having rid itself of these excesses. But what about the matter that S. Guryanov, manager of the Nizhniy Tagil branch of USSR Gosbank, recently described to IZVESTIYA? During the last five-year plan the growth of wages at the city's enterprises significantly outstripped the growth in labor productivity. The resulting overexpenditure of wages amounted to 2.5 million rubles. It would appear to be logical that this overexpenditure would be worked off by the enterprises and repaid; however, it was written off and the debt was forgiven. What do you think about such a practice?

[Answer] It's not quite the way you've put it, although there is a connection. Was it normal for a relative overexpenditure of wage funds to occur? Wages increased, as a rule, wholly in accordance with the plan; but you see, the growth in production and labor productivity fell short of the planned targets. Thus still another disproportion evolved. True, quite often these overexpenditures were actually written off. But now this practice has been put to a stop. All overexpenditures from the wage fund are subject to repayment; and this includes the material incentive fund as well.

[Question] But all this concerns the economy as a whole, in principle, so to speak. But let's take the credit mechanism itself--does it really react so precisely to the situation? Did it really operate so flawlessly?

[Answer] One must admit that part of the reason for the situation described above must be attributed to the credit mechanism. It has become more and more cumbersome and hard to manage. At almost every stage of activity of an enterprise or a farm--we call these stages projects--it has become the practice to structure their own individual loans. At an enterprise 8-10 such projects exist, and in an industrial branch there are even dozens.

Financial control over the disbursement of credit capital turned into credit trusteeship over the enterprises by the bank, which provided little in return. And this is why the congress set the task to change the credit policy and reorganize the content, organization and method of our operations--turning bank credit into a powerful means of economic incentive for the working collectives; and strengthening self-financing, which as everyone knows is in and of itself the best financial controller.

[Question] But what is being done in this direction, and what have you managed to do?

[Answer] First of all, measures are being taken to completely satisfy in a timely manner the economically sound needs of the enterprises and farms for credit, which come about through the normal course of development of production and turnover. Along with this the bank is also rendering credit aid to enterprises which are temporarily experiencing financial difficulties--however, under the unalterable condition that they quickly eliminate the causes which gave rise to the difficulty.

Incidentally, credit relations have been made much more demanding with those who attempt, as in the past, to acquire excess loans and use them to cover financial difficulties which came about through mismanagement and wastefulness. Examining from this position the loan applications from ministries and departments, Gosbank reduced them by 7 billion rubles in the first quarter of this year; by 6 in the second, and by 8.3 billion in the third.

All of these measures have already provided tangible results. Thus, whereas industrial production in the country increased by 5.6 percent in the first six months, credit increased by only 4.5 percent. That is, credit effectiveness is gradually beginning to be restored. The credit ruble is more and more a part of the antispending mechanism and is not sitting idle.

I'd like to note that the bank is trying to consider from every aspect the specific economic conditions and the tasks facing our clients: the industrial branches, and individual enterprises in industry, agroindustry, and trade. And so perfecting the credit relationships with the branches which determine scientific-technical progress is given top priority, and above all with the machine-building complex. Disbursement of loans at preferential rates for manufacturing new products, for preparing new production, and for developing new models of machinery and equipment, has been expanded by 30 percent. For these purposes the bank has extended 2.5 billion rubles to enterprises of the electrical engineering, machine tool building, and instrument manufacturing industries alone.

[Question] A special question, Viktor Vladimirovich, about self-financing: Since the beginning of last year, as is well known, an entire branch--the chemical and petroleum machine building industry--as well as dozens of enterprises from other branches, have switched to self-financing, following the example of the Volga Motor Vehicle Works and the Sumi Scientific-Production Association imeni M.V. Frunze. How does Gosbank plan to formulate financial-credit relationships with them? After all, self-financing is management based on two sources: one's own assets, and loans or credits.

[Answer] I believe this is the very time to think about the basic meaning of the word "credit." Credit signifies faith. With respect to the topic of our conversation, I would call it faith in the economy, and in businesslike methods of management. What should the Sumi experience teach us, the bank officials? That a relationship of credit trusteeship, of which I spoke previously, loses its meaning. The bank and the self-financing enterprise undergo transition to a relationship, I would say, of greater confidence. Indeed, why should every step taken by the Sumi machine builders be monitored, if it is known that they are watching their every ruble in a businesslike manner anyway, because those are their rubles, and they would not ask for too many. The direct sense therefore is to avoid their turning to the bank for their every want, with detailed justification for their credit needs, and to grant credits to such a client for, as we say, the overall project. This also makes it easier for the collective to manipulate its assets more extensively, and it relieves the bank officials of rewriting and rearranging documents, the number of which decreases significantly. Transition to this principle--granting credit for minor as well as major projects--is promising in general, since it opens greater opportunities for the managers of an enterprise to display their true economic independence and, incidentally, places greater responsibilities on them.

I'd like to point out that not only the managers, but also the administrators of local Gosbank branches are given greater freedom. For example, it is stipulated that as an incentive for effective use of credits, the manager of a local Gosbank branch may reduce the interest rate for those enterprises which have done their work well. This can provide thousands of additional rubles to the material incentive funds for the enterprise collective. And it might happen that, say, one plant has for some reason credit assets available but its neighboring plant is on the other hand in difficulties, and urgently needs a loan, and this need is sound; previously, if these enterprises were from different departments it would have been impossible to resolve the problem locally. Now, it is envisaged that the local Gosbank branch can redistribute credit resources among enterprises of different branches, as business interests require. Other proposals are being studied as well for improving credit relationships. Some of the proposals are quite radical. Many scientists and practical workers believe that those enterprises and farms which are in arrears in paying off their loans must pay them off with a portion of the profits which remain at the disposal of the enterprise, which has an effect on the material incentive fund for the collective. Extreme? I agree. Therefore let the administrators also explain to the collective what brought about such severe terms and what must be done in order to restore the trust of the bank.

[Question] The editors' mail contains letters in which the readers bring up such measures of influence on debtors as declaring them insolvent--bankrupt, if you will. Previously such declarations were made via the press. Is that not why, ask the readers, some farms are chronically lagging behind, since such sanctions are not a threat to them today?

[Answer] Declaring enterprises insolvent was our practice in the mid-1950's to the end of the 1960's. It served as a warning, a signal, first of all to the suppliers of a given enterprise, of the fact that it had no means to settle accounts with them; and secondly, it served as a signal to the branch

administrators: upon this signal they would immediately designate an authoritative commission empowered to take "measures to rescue" the debtor on the spot, and to liquidate its debts. What can I say? The measure may be effective, but it is more of an administrative than an economic measure. You ask: "Are there any insolvent enterprises today?" And I reply, "There are." But one must find the specific reasons. If the insolvency was brought about by, for example, the mismanagement of the enterprise itself, then in addition to the measures of economic influence on the debtor in effect today, one must also make use of publicity.

[Question] When talking with managers, one often hears that financial management in general, and the credit mechanism in particular, "throws too much paper around", and this markedly slows down acceleration. No doubt you and the bank officials have also heard such comments.

[Answer] I can tell you right now of practical solutions for such criticism justly directed against us. They consist of sharply reducing the number of instructive documents, and others. All basic instructions on financing and granting of loans are being republished and combined. Even today the enterprises are presenting to us, to the bank, 40 percent less paperwork--and this completely covers the assets and the expenditures for which they wish to obtain credit. The number of documents required for obtaining credit for capital investments has decreased by a factor of four. By virtue of reducing the kinds of loans and extending the accounting periods, the number of indicators in the documentation was reduced by over 11,000. The abolition of obsolete provisions is quite often such an urgent and timely matter that it must be accomplished efficiently, and urgently, by telegram. But then how can it be otherwise? In reconstruction there is no time to waste.

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INDUSTRIAL DEVELOPMENT AND PERFORMANCE

QUALITY CONTROL MEASURES CRITICIZED, IMPROVEMENT DECREED

Independent Product Certification System Needed

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 29 Jun 86 p 2

[Article by A. Dobromyslov, chief engineer, All-Union Scientific Research Institute on Standardization, Moscow: "Who Holds the Reins of Quality?"]

[Text] In my line of work I sometimes encounter situations in which the creators of obviously unnecessary products are not in the least disturbed by the results of their labor. They calmly shrug their shoulders, "And what of it? Has it not been certified?"

Frankly speaking, such reasoning is beyond me. We all know that certification was supposed to stimulate output of high-quality products. But has it not turned out that it also does the opposite--that it serves as a shield for those who work piles up in the warehouse, or has to be sold at a loss? And has the certification system itself not compromised itself, if it covers up unseemly matters?

Every year tens of thousands of articles are certified in our country in terms of category of quality. A whole army of associates and supervisors take part at enterprises, scientific-research institutes, ministries and departments. Orders are issued, inquiries are prepared, measures are planned, protocols and legal acts are drawn up. All of this is worked out, discussed, coordinated and approved, and as a result...there is no assurance whatsoever that all 30,000 articles which have been awarded the State Seal of Quality actually correspond to world-class achievements. From our own experience, we've all learned that, alas--they do not meet the standards!

I'd like to raise the question myself, whether such huge expenditures of labor and material resources for certification are necessary. Is such certification necessary at all, if it guarantees neither assurance of the rating of the technical level, nor the quality of production? I'm convinced it is not.

Since I'm an associate at the All-Union Scientific Research Institute on Standardization, I know that changes are made left and right to the certification procedure in order to force it to play its assigned role. But in spite of the adjustments, there are to this time no clear-cut principles for evaluating the technical level and the quality of the products.

It's high time we admitted this is not the way to stimulate production of competitive products--articles with high technical-economic, aesthetic and other characteristics of quality; we are merely perfunctorily registering the level of quality we have achieved.

At the 27th Party Congress and at the June (1986) CPSU Central Committee Plenum it was stressed that the fundamental restructuring of the economy is closely associated with a significant increase in the quality of products; thus how can registration be utilized here? In my view we must put a stop to all those partial improvements and changes, and--change our basic point of view on the problem. From this point on, several basic tasks emerge--the first of which is ensuring the objectivity of certification.

But can the evaluation of quality be objective, if the manufacturing ministry is responsible for organizing the state certification commission? If these commissions quite often "surrender at discretion" both to the one directly responsible for manufacturing the product, and to the local government authorities? If one and the same type of product is certified by different commissions, depending upon which ministry is its manufacturer? Can there even be any discussion of uniform requirements here?

But there is a way out of the situation. State certification commissions, specializing in certain kinds of products, must be set up. And they must be totally independent of the branch ministries. The commissions should have permanent members--skilled specialists, personally commissioned by Gosstandart, who do not represent the organization at which they hold permanent jobs. They may be associates at scientific-research institutes (as well as academic institutions) or instructors at higher and secondary special educational institutions; they may be trade specialists or experts from foreign trade organizations; or they may be workers from consumers' organizations and repair shops. It is important to observe one condition: the members of the commission must not take part in certification of products with whose development and manufacture they have been associated.

Incidentally, even the most skilled and independent experts will not be able to make a sufficiently competent decision on the technical level and quality of products without complete and reliable information on its indicators. These can be derived only as a result of testing; and this is the next task.

On what are the tests based in our day? Since 1979 a network of official organizations has existed in our country for state testing of the most important kinds of products. There are now more than 180 of them. As a rule they have been set up on the facilities of scientific-research institutes, production associations and enterprises, and at machine-testing stations. The best of them have become effective barriers to products which do not meet contemporary requirements, standards, or technical conditions. But, as with the state certification commissions, many of the official organizations more often than not do not display the required objectivity, when it is a question of products from "one's own" ministry, or "one's own" city. What's the problem here? Once again the problem is that the majority of them are subordinate to the manufacturing ministry. And certain ones are even the developers or the manufacturers of the very products which they are testing.

The question arises: but is this official state testing? Judging from the results it is clearly not. In other words, all the testing organizations must be independent of the manufacturer of the product. This, incidentally, does not rule out making use of the technical facilities of the latter. Supervisors at state testing centers (or organizational subdivisions of the official organizations) must be assigned to and relieved of their duties only with the consent of Gosstandart. In addition, such centers must have their own seal and serialization. And, what is quite important--they must carry out their work on a self-supporting basis only. It is entirely possible to set up a number of such specialized centers, independent of the manufacturer and the user and seller as well, using facilities at the institutes, centers and laboratories of Gosstandart.

One important consequence results from this. The official organizations and their testing centers can become the technical and organizational bases for certification. All of their procedures, right down to issuing the certificate, are concentrated right there. The introduction of such an organizational structure would make unnecessary the expert examination of an enormous amount of materials on certification at Gosstandart, and would significantly reduce the flow of paperwork.

And now let us take a look at the stage of "life" of a product at which the evaluation of its quality is made. Unfortunately, as a rule it is made at the stage of serial production. This is fundamentally wrong, since at this stage it is very difficult to introduce changes to the design and the technology of manufacturing the product--or else it's altogether impossible. Attempts to raise the technical level of articles here are inevitably fraught with the risk of significant material losses, increasing the amount of defects, and upsetting the production rhythm. The moral side of things here is such that the collective learns too late of the fact that the product which it has begun to produce will neither enhance its reputation nor bring it profits.

In order to avoid all of this, certification must be carried out only at the stage of setting up production of the article. The first stage is analysis of the technical level of the experimental model; the second is confirmation that the enterprise is capable of producing the article consistent with the required quality.

And now a few words about recertification. No matter how many resources we spend on it--it's beyond comprehension--the products get no better. It goes without saying that high quality should be built-in to all the articles produced in our country, and they should completely meet the required standards and technical conditions. However, does it not seem strange to certify that the 0.4-liter-capacity enamel-on-steel drinking cups, for example, which we've been producing for ten years now, are a world-class achievement? Is it not pathetic that the labor of many people should be expended for routine recertification of coil springs for telephone dials, which we've been producing since 1968? These, as well as a large number of similar articles have been awarded the State Seal of Quality. But what good is it?

The following way out is suggested: only that production which defines scientific-technical progress should be certified--the most important means of production, complicated domestic appliances, and so on; also such especially important articles which have great significance independently, as component parts--such things as automobile engines or tires. At the same time the product must be the end product for the consumer and not for the manufacturer, as it is presently established. Gosstandart, along with the State Committee on Science and Technology and USSR Gosplan, must draw up and approve a list of products for which certification is appropriate.

And what, you ask, of products not subject to certification? Children's toys, for example; clothing, and other articles? In addition to defining their grade or noting innovations, for many of them an evaluation of their adherence to the required standards is necessary: specifically, with respect to the safety of these articles for people, or for the environment; and their economical nature. And this--is product certification. It must be emphasized that national certification systems exist in the majority of the world's developed countries, including socialist countries. Introduction to our country would supplement our system of certification.

Increased Product Quality Sought

Moscow EKONOMICHESKAYA GAZETA in Russian No 23, Jun 86 p 16

[Article by V. Opryshko, doctor of juridical sciences, chief of the legal disciplines department at the Kiev Institute of the National Economy imeni D.S. Korotchenko, under the heading: "Quality is a Political Matter": "Problems of Legal Regulation"]

[Text] In recent times it has been justly noted that the technical level and the quality of many articles are some of the most vulnerable points in the economy, and are a source of problems and difficulties. How can these problems be solved more rapidly?

Obviously one must not underestimate in this sense the significance of such an important means of observing state discipline and a high state of organization and order in the area of product quality, as that provided by law. There are quite a few urgent problems in improving legal regulation of quality which must be resolved by USSR Gosstandart, the USSR Ministry of Justice, and other ministries and departments. Juridical science, which has not yet devoted sufficient attention to research on urgent problems of the mechanism of legal regulation of product quality, has also been summoned to take a more active position.

Take, for example, legal liability for production of substandard articles. In 1985 alone, inspectors from the Ukrainian republic administration of Gosstandart, based on accounting reports on fulfilling plans for sales at a number of enterprises and associations isolated 120 million rubles worth of such production, and withheld 10 million rubles for the state budget for illegally-achieved profits. At 2,650 enterprises the sale of poor-quality

products was forbidden, and 12 enterprises were forbidden to manufacture the products altogether. More than 300 decisions of state certification commissions on assigning the products to the highest category of quality were overturned last year as a result of violations of the existing law on certification.

It would seem that with such a state of affairs there is every basis for taking the disciplinary, administrative, civil-legal and criminal sanctions prescribed by Soviet jurisprudence. However, whereas certain sanctions are used to one degree or another in the struggle with bad workmen, the measures dealing with, for example, criminal liability stipulated by the criminal codes of the union republics, are hardly ever applied. And this is in spite of a significant number of instances of production of large amounts of poor-quality products.

How can one explain such a situation? First of all, by the lack of sophistication of the indicated norms themselves. The question of what constitutes "repeated" production of defective goods (or, as it is stated in the criminal codes of certain union republics, "systematic"), has not been a subject of particular interest. And then the reference to "major production" of defective goods is also rather difficult to define in practice.

Truly, under the conditions in which our industry produces an enormous amount of articles in a variety of ranges, costs, and purposes (from matches and nails to excavators, steamships and complex machine tools), it is difficult to define under what circumstances one should consider the product output to be "major." Proceeding from this point, the Plenum of the USSR Supreme Court in its decree of 5 January 1985 explained, that in the given situation one must take into consideration the total amount and the value of the articles produced, as well as the amount of damage done. But you see, on the basis of legal practice, production in major amounts is defined for products for industrial-technical purposes only in terms of a value of 10-20,000 rubles and above; and for consumer goods, from 3,000 to 5,000 rubles.

Of course, certain difficulties also arise in connection with the fact that not all administrators have become reoriented, and not all are giving the proper political, economic and social consideration to violations of the law connected with producing low-quality goods. And this in turn gives rise to a certain difficulty among the law-enforcement organs on bringing the responsible persons at enterprises and associations to justice.

Or take the following example: In May 1984, the Presidium of the USSR Supreme Soviet adopted the decree "On Administrative Liability for Violation of the Rules for Standardization and Quality of Production, and for Putting into Circulation and Supporting Measurement Devices and Using Them", the norms for which were subsequently incorporated in the codes of the union republics for administrative law violations. In accordance with the decree, responsible officials who have committed violations are subject to administrative liability in the form of a warning or a fine of up to 100 rubles.

And according to the materials of the state inspectorate organs of the Ukrainian republic administration of Gosstandart, in 1985 the administrative commissions levied fines on about 3,000 persons. The average amount of the fines per person, however, amounted to 25 rubles.

And it's not that the administrative commissions want to appear to be kind-hearted--not in the least. It's simply that it is difficult for them to deal with the content of such administrative misdemeanors, and that they lack specialized knowledge to properly establish the guilt and liability of the responsible officials. Fear of making a mistake results in levying fines in minimal amounts. In addition, these organs are burdened to the limits with matters in other categories, which do not permit them to conduct thorough and comprehensive investigations and make objective decisions on matters connected with violation of the laws on standardization, quality of products and metrology.

Considering the severity of the problem of raising product quality and beefing up the role of measures for administrative liability, it would seem the sensible thing to give the right to independently impose fines by administrative procedure to the wholly competent and authoritative organs of the State Inspectorate for Quality of Goods and Trade (Gostorginspektsiya) of the union republic trade ministries. After all, the UkSSR Gostorginspektsiya alone almost every year conducts (in parallel with Gosstandart organs) up to 30,000 inspections, and in many cases uncovers the grossest violations of normative-technical documentation.

On the whole, the time has apparently come to place the organs of Gostorginspektsiya under the supervision of Gosstandart--which would permit eliminating the parallelism and duplication, and increasing their operating efficiency; the more so since quite often there are cases in which Gostorginspektsiya is used by the ministries of trade for purposes for which it was not intended, which even conflict with the tasks facing it, and which force it to take a bureaucratic approach when solving inter-branch (inter-departmental) problems.

I believe that many of these problems will be solved by the law on product quality currently being drawn up, and that the establishment of an extra-departmental product acceptance commission subordinate to USSR Gosstandart will, of course, have a positive effect. A complex of organizational, economic and legal measures directed toward raising the technical level and quality of manufactured products, in the light of the decisions of the 27th CPSU Congress, are to be implemented in accordance with the recently-adopted decree of the CPSU Central Committee and USSR Council of Ministers on fundamentally increasing product quality.

But still another problem must be solved: to increase the level of legal knowledge of those who are already working in the national economy, and the future specialists who are studying at the nation's economic, juridical, engineering, and other VUZ's. But this requires certain changes in their academic programs. And of course the law enforcement organs have an enormous role to play in observing the legislation of product quality. Increasing product quality is a complex problem whose solution requires a comprehensive approach.

Standards Chairman Describes Provisions of Decree

Moscow EKONOMICHESKAYA GAZETA No 30, Jul 86 p 5

[Interview with Chairman of the USSR State Committee on Standards Georgiy Dmitriyevich Kolmogorov: "On the Way to Higher Quality"; date and place not given]

[Text] Not long ago the CPSU Central Committee and USSR Council of Ministers adopted the decree, "On Measures for Fundamentally Improving Product Quality."

Our correspondent requested that Chairman of the USSR State Committee on Standards Georgiy Dmitriyevich Kolmogorov comment upon the most important provisions of this document, and describe the measures being taken by the committee for implementing them.

Question: What principally important and new things are contained in the decree which was adopted?

Answer: As you know, the 27th CPSU Congress and the June CPSU Central Committee Plenum devoted a great deal of attention to the problems of fundamentally improving product quality. The solution to this problem requires cardinal reorganization of the activities of the central economic organs, ministries and departments, associations, enterprises and organizations.

The scale and significance of the tasks facing us were given special emphasis in the adopted decree: "Increasing the quality of products and work performed," it states, "must become a party-wide, government-wide, and nation-wide matter; the central link in the development and realization of long-term, five-year and annual plans; a subject of constant attention and monitoring; and the principal factor in analyzing the activity of every working collective.

Thus, with the promulgation of the decree a principally new stage in the solution of product quality has begun.

It is well-known that the technical level and quality of finished goods is to a great extent determined by the state of the advance of scientific ideas, and by the quality of the engineering solutions employed at the very beginning of work on creating a new model. And there have quite often been cases in which, while still in the design stage, the guidepost chosen for the technical level could have been provided without a great deal of effort by the designer of the given machinery or equipment himself. But owing to their complacency, designers of new technology have for the very same reason selected for their model a foreign-made device, which did not at all reflect the highest world level achieved in that area.

As a result of such a lack of demandingness on one's own work articles have also been produced with their basic technical-economic indicators knowingly reduced. For example, many planting machines of domestic manufacture are 20-30 percent less productive than the best foreign-made models of a similar nature. And practically all of the refrigeration equipment produced by the Ministry of Machine Building for Light and Food Industry and Household Appliances for trade enterprises and public catering are 20-40 less efficient than the best foreign-made analogs in terms of their energy demands and the amount of materials used in their manufacture. Unfortunately there are quite a few such examples.

Now the designers of new or modernized equipment and technological processes have been made fully responsible for implementing in their designs far-reaching requirements for their technical level and quality. General (chief) designers must personally answer for these indicators. For the first time the categorical question has been posed on forbidding putting into production designs which do not meet the highest world standards. This measure, along with increasing the administrative and material responsibility for the quality of manufactured products must, in our opinion, become a reliable barrier in the path of obsolete technology.

The decree contains a number of specific measures which establish a direct relationship between the analysis of the economic activity of branches, associations and enterprises, and the manufacture of high-quality products. Thus, the indicators for the technical level and quality of production will become definitive in formulating the amounts of economic incentive funds for the working collectives.

I'd like to point out that these and a number of other provisions of the decree comprise the creation of a rather well-proportioned and efficient mechanism for the economic and moral stimulus of the working collectives in working toward achieving high quality production.

At the same time the human factor is a subject for special attention. Increasing the creative activity of the working people in improving product quality and increasing the responsibility of those directly involved for the end results of their production; developing the brigade form of labor organization and establishing brigade responsibility for making bad products; and, orienting on socialist competition in order to achieve the highest-quality articles--these comprise a far from complete list of the questions associated with this problem.

Question: What made it necessary to introduce formal state acceptance of products?

Answer: In recent years serious concern had arisen because of the increasing number of cases in which manufactured products which met neither the standards of quality nor the requirements of normative-technical documentation, were nevertheless stamped OTK [Technical Control Department]. Inspections conducted by the state inspection organs revealed that this phenomenon had become extremely widespread. To a large extent this was

connected with the lack of demandingness toward the manufactured products on the part of the technical control services, and is frankly explained by their material interest in the "high planned" indicators for the economic activity of the enterprise.

In order to seek a radical solution to the problem, a year and a half ago a representative body from Gosstandart was established at 19 enterprises which manufacture machine-building products. Objective official acceptance of products carried out on a state level, which takes into consideration the national economic interests and the requirements of the consumer, has altogether proven its effectiveness, and has become a reliable barrier to defective products.

This experiment showed that the representatives from Gosstandart in fact not only delivered strict verdicts, they also effectively assisted the administrators of the enterprises in developing their technological processes, in strengthening the contract-discipline of the subcontractors who furnished the raw materials, supplies and completed articles. In addition, they assisted in solving other problems directly or indirectly associated with the problem of quality.

Independent control, carried out in the name of the state, has brought about increased responsibility for every section in the entire chain of the production cycle, and has permitted radically increasing the proportion of articles delivered since the initial presentation.

In a word, formal state acceptance as a form of product quality control has been found to produce very good results.

These and a number of other arguments have proven the expedience of setting up an organ of extra-departmental control--state formal acceptance organs, whose authority goes into effect on 1 January 1987 at associations and enterprises which manufacture the most important national economic products, as well as consumer goods.

Question: How are the preparations for organizing state formal acceptance coming along?

Answer: Gosstandart and interested ministries have issued joint orders, which stipulate carrying out a complex of operations to establish proper production procedure and to ensure the readiness for handing products over to the state acceptance organs. State acceptance organs have already been established, and the most competent and skilled cadres have been selected. The preparatory process is proceeding exactly according to plan, in accordance with the schedules approved in conjunction with the ministries.

Work is being completed on a set of normative-technical documents, which regulate the activity of state acceptance. Comprehensive training of acceptance supervisors and specialists is being organized. During the training process, business exercises will be conducted which examine real production situations.

Supervisory officials have been designated at the ministries and at Gosstandart, who are responsible for organization of state acceptance at specific enterprises. As soon as possible, design, technological and normative-technical documentation is to be introduced at the enterprises in accordance with the established requirements; technological discipline is to be strengthened; and certification is to be provided for the workplaces, equipment and devices, for the purpose of quality manufacture of articles. An entire complex of operations must be completed to fundamentally improve the activities of the technical control departments. And finally, the conditions must be established for state acceptance work--for equipping additional test benches for inspecting and testing the articles.

Question: What is already being done for coordinating the activities of ministries and departments, for the purpose of achieving stable indicators of quality?

Answer: Among the measures carried out by Gosstandart in coordinating the activities of the ministries and departments for achieving stable indicators of quality, reliability, and a high technical level for the manufactured products, I'd like to give special emphasis to the development of the "Quality Program" in the branches, associations and enterprises, in various regions of the country.

This work is being carried out under the methodological supervision of Gosstandart. A number of programs have already been examined and approved by our committee. Altogether such programs have been worked out in more than 20 branches, in many republics, krais and oblasts.

I'd like to take note of the Leningrad, Tula, and Moscow "Quality Programs." In the process of their development, the tasks of the associations and enterprises were expanded for raising the technical level and quality of the manufactured products. But the most important thing is that the specific organizational and technical measures being implemented at the enterprises of various ministries and departments of a given region were tied in with the branch plans for intensification of production and increasing the technical level and quality of production.

The 12th Five Year Plan, as is well known, envisages completing on the whole the introduction of Comprehensive Systems for Product Quality Control. They are being worked out and introduced by enterprise, as well as at the administrative levels in the branches and regions.

Today branch systems are being introduced in 33 ministries and departments in the country. More than 35 republic ministries have already registered similar systems.

Comprehensive standardization will be the most important means for ensuring the interaction of branches in raising the quality and reliability of products. Developing and implementing programs for comprehensive standardization are the means for inter-branch quality control of assimilating new equipment on the part of Gosstandart; and are a means for assisting designers of the finished products at the head offices in receiving completed articles and high-quality materials.

Question: The desire was expressed to subordinate the technical control service to the enterprises of Gosstandart. How do you feel about these desires?

Answer: I do not think that this makes sense. You see, the operations of technical control are an integral part of the technological progress; we believe that a principally different approach to the "OTK Problem" is needed, and specifically: to increase the effectiveness of this instrument of quality control. A second and no-less important aspect is to teach the enterprise administration to effectively and intelligently make use of this instrument. The decree which was adopted speaks of this most clearly and completely.

Defining the criteria for evaluating the work of technical control service officials is becoming extremely important. The quality of the manufactured products should be the standard criterion, and only that. Increased incentives for officials of these services are planned in order to expand the role of the technical control services at associations and enterprises.

Question: The highest world level of products: What is being done along the lines of Gosstandart in order to achieve this?

Answer: Practically all directions of Gosstandart's activities are dedicated to the main task--ensuring the highest world level of products.

Developing state standards along the lines of long-range requirements establishes the normative, that is, the mandatory basis for the technical tasks for newly-developed products. They lay down a level of requirements such that by the start of serial production, the products meet the highest world level.

The requirements of State Standards and the system for developing and delivering products for manufacturing, after they have been examined, stipulate that it is impossible to put into production new technology which does not meet the highest world level.

Gosstandart plans to demonstrate much greater adherence to principle and demandingness to the leading (by type of product) ministries and subcontractor ministries in order that these programs, both in terms of level and completeness, are truly special-purpose and comprehensive programs.

Achieving the highest world level of products, it goes without saying, also means promoting such directions of Gosstandart's activities as organizing a system of product testing, certifying it, and providing to the national economy highly-productive high-precision measuring equipment. And this, of course, also serves the organization of state product acceptance as a new form of quality control.

RESOURCE UTILIZATION AND SUPPLY

NEW DIRECTIONS IN RESOURCE CONSERVATION EXPLORED

Moscow IZVESTIYA AKADEMII NAUK SSSR, SERIYA EKONOMICHESKAYA in Russian No 3, May-Jun 86 pp 35-46

[Article by O. I. Tarnovskiy: "A Policy of Economical and Rational Use of Material Resources"]

[Text] This article reviews the three main areas of resource conservation: utilization of the resource-conserving function of scientific-technical progress, activating the human factor in the sphere of conservation of fuel, energy, and raw materials, and structural reorganization of the national economy toward a resource-conservation type. The author reveals specific ways to conserve resources within each of the main areas of economical and rational use of fuel-energy and raw material resources.

The 27th CPSU Congress thoroughly substantiated the policy of economical and rational use of fuel, energy, and raw and processed materials. This policy is one of the main thrusts in carrying out the design for socioeconomic development of our society. It is inseparably linked with the transition of the USSR national economy to the path of intensive development based on acceleration of scientific-technical progress, creating conditions for a substantial rise in the efficiency of public production.

The transition to the intensive type of economic development on the basis of scientific-technical progress necessitates a steady rise in the level of rationality of utilization of all economic growth factors, including allout conservation of both live and embodied labor. Fuel-energy and raw material resources are an important component of the latter.

In posing the question of the need for allout conservation of material resources, the CPSU begins from the directions of V. I. Lenin, who focused economic policy under socialism on economical management of the economy (see [1, Vol 36, p 174; Vol 43, pp 173, 261, 283]). At the very dawn of Soviet power V. I. Lenin put forward with special force the demand not only for an increase in, for example, coal extraction, but also "economy in its use" [1, Vol 36, p 371].

This demand was heard again at the 27th CPSU Congress in the Political Report of the party Central Committee to the congress. M. S. Gorbachev pointed out the need "to economize in everything and everywhere -- in production and in everyday life and not to be indifferent to mismanagement and waste." [2]

Solving the pressing problems of conserving and rationalizing the use of fuel and raw materials involves more than just development of productive forces and acceleration of scientific-technical progress. To a considerable degree it depends on further improvement of production relations and the economic mechanism. In current conditions the very approach to managing the economy including its fuel-raw material sphere, is changing. We know that this sphere formerly developed in such a way as to most fully supply the country's fuel and raw material needs by greatly increasing production. The priority target now is increasingly meeting national economic needs for material resources on the basis of rationalizing their use and on allout conservation. And the significance of this line of activity will grow steadily in the future. The challenge has been posed of making resource conservation the crucial source for meeting growth in national economic needs for fuel, energy, and raw and processed materials by the year 2000 [3, p 28]. It should cover 75-80 percent of the growth in needs for material resources [4, p 14].

The need to transform resource conservation into a priority area of economic policy is also dictated by the trend toward higher cost of extracting fuel and raw materials which can already be seen clearly. The objective nature of this rise in costs is confirmed by the widespread practice of developing new deposits located in remote eastern regions of the country which in part lack well-developed infrastructures. At the present time the deposits of Western Siberia produce two-thirds of all USSR petroleum extraction and more than half of the gas extraction. Shifting the centers of extraction to the east, to Siberia and the oblasts of the Far East, increases expenditures for building up the area, transportation, and establishing communications several-fold. The volume of necessary capital investment is growing rapidly. In the early 1960's it took 2 rubles of capital investment to increase the extraction of fuel and raw materials by 1 ruble; at the start of the 1980's this figure had risen to about 4 rubles, and it is now 5 rubles and more [8, p 60].

Intensive resource conservation is also necessitated by the marked worsening of the qualitative composition of the fuel and mineral raw materials extracted from traditional deposits. For example, the pure iron content of iron was in 1950 51 percent on the average, while at present it is only 35 percent. This forced the adoption of measures to enrich the ore, and the extent of ore enriched has increased from 33 percent in 1950 to 87 percent at the present time [9, pp 7,8]. Additional expenditures to obtain the commodity ore that is shipped to national economic consumers have risen substantially.

Conservation, raising the level of utilization of material resources, and rationalization of resource requirements can provide a major economic benefit, significantly greater than, for example, savings on wages for the same percentage of savings. The cost of fuel, energy, and raw and processed materials in the production costs of industry is 75 percent, while wages are just over 14 percent; this means that a savings of material resources produces a benefit five times as great as a savings of live labor [11, p 6].

The economic benefit from conservation of material resources will steadily rise as production expands. With the passage of time, therefore, even the same rate of savings in the national economy will have an increasingly decisive impact on growth in USSR national income. Some figures will provide evidence of this.

In 1965 national income rose 2 billion rubles for each percentage point of reduction in material expenditures (in comparable prices), while in 1970 the increase was more than 3 billion, in 1980 6 billion, and today more than 7 billion rubles. This is enough capital to build, for example, 700,000 well-appointed new apartments today.

The USSR is persistently searching for ways to effectively conserve material resources, and some progress has already been observed in this area. In the period 1981-1984, for example, it was possible to conserve 79 million tons of boiler-furnace fuel, 271 million gigacalories of thermal energy, 94 billion kilowatt-hours of electricity, and 35 million tons of light oil products. The volumes of savings of various types of raw and processed materials are significant: 6.6 million tons of rolled ferrous metals, 7 million tons of cement, and about 12 million cubic meters of lumber, while about 700 million tons of various secondary resources have been brought into economic circulation. In all the savings of material resources in the Soviet national economy in the 11th Five-Year Plan reached about 5 billion rubles.

The country already has entire oblasts and Union republics which have made major progress in resource conservation and utilization of secondary resources and production waste products. In his statement at the Conference of Party and Economic Activists of Tyumen and Tomsk Oblasts M. S. Gorbachev cited the Ukrainian SSR as an example "where, in the last 4 years, the rate of decrease in the metal-intensiveness of output has been more than double the plan assignments. They are drawing more than 500,000 tons of secondary resources and waste products into industrial production. Their proportion in total resource consumption has been raised to 12 percent. This is twice the all-Union level"[5, pp 18-19].

It is planned to consolidate and multiply the positive changes in resource conservation. The 27th CPSU Congress posed the task of lowering the energy-intensiveness of USSR national income by at least two-sevenths and metal-intensiveness by almost one-half by the year 2000 [4, p 14]. Plans for the 12th Five-Year Plan, which must make a significant contribution to accomplishing the strategic tasks of the coming 15-year period, call for total savings in the national economy of 200-300 million tons of organic fuel (standard fuel), including 75-90 million tons through development of atomic power and the use of replaceable energy sources, plus conservation of 12-14 million tons of rolled ferrous metals [4, p 21]. At the same time construction will conserve 14-16 percent of rolled ferrous metals, 10-12 percent of cement, and 12-14 percent of lumber [4, p 61].

Already in 1986 the State Plan of Economic and Social Development of the USSR envisions that savings of resources will cover 67 percent of the growth in national economic requirements for rolled ferrous metals, 51 percent for fuel-energy resources, 93 percent for cement, and 69 percent for lumber. For the national economy as a whole the savings of material resources will be 3.6 billion rubles as compared to 1.5 billion in 1984 [7, p 3]. The metal-intensiveness of USSR national income must be reduced by 2.7 percent and energy-intensiveness by 3 percent [6, p 33].

Such large-scale plans in the area of resource conservation have never before been put forward in the USSR in its entire history. Successful realization of these plans demands detailed development of the main areas in which economical and rational use of material resources must be implemented.

The first main area in ensuring economy and rational use of raw and processed materials and fuel-energy resources is utilizing the resource-saving function of scientific-technical progress. It is essential to achieve a significant saving of material resources by lowering expenditures of them (in physical and cost terms) per unit of output produced. This should be done first of all on the basis of measures related to broadest possible utilization of scientific-technical progress in the national economy. It is important here to achieve an increase in the production of final output on the basis of comprehensive processing of raw materials. "Scientific-technical progress," the new redaction of the CPSU Program points out, "must be aimed at a radical improvement in the use of natural resources, raw and processed materials, fuel, and energy in all stages -- from extraction and comprehensive processing of the raw material to production and use of the final output" [3, p 27].

The resource-saving function of scientific-technical progress, which with proper application accounts for 60-70 percent of all possible savings of fuel, energy, and raw and processed materials in the USSR, appears in especially complete and productive form in three areas: reducing the resource-intensity of a unit of output; decreasing national economic requirements for additional material resources in light of the rising technical level and quality of output; increasing the production of final output from the same volume of material resources.

The application of scientific-technical progress in the area of economizing on material resources is directed above all to intensification of their use, which involves achieving the greatest possible production of output in each stage of the production process. The problem of lowering the resource-intensiveness of output is solved by reducing expenditures of material resources to produce a given number of articles. Faster growth rates of national income are its general national economic result.

The fact that the indicator of resource-intensiveness in some cases such as the sectors that produce identical output on a mass basis is calculated in physical terms per unit of the article does not contradict the above. A monetary evaluation of fuel, energy, and raw and processed materials per ruble is used to figure their contribution to national income as well as in determining the indicator of resource-intensiveness in sectors which produce an assortment of output. And for the national economy as a whole the indicator of resource-intensiveness is determined as the cost of material expenditures (without depreciation) per ruble of national income.

One of the productive lines of technical progress in the resource conservation area is developing, designing, and using machine building parts that have lower metals-intensiveness. Reducing the weight features of machinery and equipment without impairing its quality is a prime challenge facing the scientific research and experimental design organizations and all machine building sectors.

In this respect the USSR national economy has already accumulated numerous positive examples. For example, based on the use of progressive technical concepts the PenzkompRESSORMASH Production Association reduced metal consumption in compressor manufacture by almost 30 percent in recent times. They have covered all growth in output with the savings of rolled ferrous metals. The

conservation policy enabled the associated to conserve about 1,500 tons of rolled metal and 10 million kilowatt-hours of electricity. An even more decisive reduction in the metal-intensiveness of compressors is planned. In the 12th Five-Year Plan they will be 30 percent more powerful than their predecessors, but weigh 1.5 tons less.

Reducing specific metal-intensiveness gives a particularly tangible effect in the automotive industry, where reducing the total weight of the vehicle makes it possible to ensure an additional savings of fuel during operation. A number of tangible achievements have already been made here. For example, the new ZAZ-1102 vehicles from the Zaporozhye Automotive Plant use a highly economical front-wheel drive variation which precludes the need for a bulky universal joint. During development of the model special attention was devoted to reducing the weight of parts, which are now often made of polymers and aluminum alloys. The new vehicle is 110 kilograms lighter than the previous model.

In some cases Soviet industry turns out articles which surpass analogous Western models for the indicator of metal-intensiveness. Examples are gas turbines from the Ural Turbomotor Plant and electric pipe welding units from the Elektrostal Heavy Machine Building Plant, among others. But in most cases our machines and equipment, as well as construction elements, are still inferior to Western ones in terms of material-intensiveness. National economic losses for this reason and as a result of frequent repair work on machinery and equipment, which consumes additional quantities of metal, are 42 billion rubles a year. According to existing calculations, expenditures of steel in the USSR per unit of national income are 1.5 times higher than the other technically developed countries, while for cement they are about 2.5 times higher [11, p 6].

The resolutions of the 27th CPSU Congress aim at decisively eliminating all these negative phenomena, first of all by improving machine designs and by broadening the use of progressive design materials -- bent, shaped, and precision metal sections, metal powders, light alloy rolled steel, and plastic parts. Specific metal-intensiveness of machinery and equipment will be lowered by 12-18 percent for the country as a whole in the 12th Five-Year Plan, and specific energy-intensiveness will go down 7-12 percent. At the same time it is planned to cut the expenditure of rolled ferrous metal an average of 27-29 percent, steel pipe by 20-22 percent, and rolled nonferrous metal by 21-23 percent calculated per 1 million rubles of commodity output [4, p 30].

The resource-intensiveness of each unit of output is also lowered on the basis of developing and applying resource-conserving technologies and equipment. Examples here are the technologies of precision casting and cold stamping in machine building, continuous steel pouring in metallurgy, aggregate sawing in wood processing, production of nonwoven materials in the textile industry, and cast-in-situ technology in construction. Broad practical application of these technologies would give the country a major savings of material resources. It has been calculated that each ton of metal powder frees up to 1.5 tons of rolled metal, and the longevity of an article made of powders almost doubles [10, p 207]. Using the technology of continuous casting of semifinished steel pieces makes it possible to conserve about 20 percent of the metal.

Dissemination of resource-conserving machinery and equipment in various sectors of the national economy promotes savings of fuel, energy, and raw and processed materials while the production of high-quality output increases. The introduction of energy-efficient machinery in the national economy is exceptionally important for lowering the specific expenditure of liquid fuel and energy. Thus, in automotive industry replacing the gas engine with a diesel makes it possible to reduce specific fuel consumption (compared to gasoline) by 25-30 percent, and engine life increases significantly (1.5-2 times). The document "Basic Directions of Economic and Social Development of the USSR for 1986-1990 and the Period until the Year 2000" sets the goal of raising the production of diesel trucks and tractors to 40-45 percent of all motor vehicle production [4, p 34]. In the near future diesel trucks and tractors should already be taking over a significant part of transportation work in the USSR.

Thanks to their higher efficiency the new generation of electric motors makes it possible for the USSR national economy to receive an annual economy of 2 billion kilowatt-hours of electricity. In addition, their manufacture now consumes 15 percent less materials than the motors produced earlier. On this basis the entire growth in output from electrical machine building in the country during 1976-1985 was obtained without increasing consumption of resources.

The resource-conserving function of scientific-technical progress is also realized in raising the technical level and quality of machine building output and articles from other sectors of the national economy. If output whose production required a certain amount of materials and energy satisfies public needs more fully and for a longer time, this will result in a relative relaxation of the need to draw new material resources into economic circulation to manufacture additional quantities of this output. But a lowering of the technical level and quality of articles is usually associated with an inevitable search for additional volumes of material resources to ensure economic balance between the available quantity of the output and demand for it.

A rise in the technical level of output manifests itself in savings of material resources in two ways. On the one hand, it takes the form of an increase in the unit capacity of machinery and equipment relative to the resource that is consumed, for example energy. At the same time the material-intensiveness of such articles often decreases too. For example, equipping thermal power plants with modern equipment, including highly economical heavy-duty condensation and central heating types, offers an opportunity to double the production of electricity while maintaining the specific fuel consumption and to lower the cost of repair and number of personnel by 5-10 times.

On the other hand, an increase in the technical level and quality of output leads to an increase in the normative and -- even more importantly -- factual period of its full-fledged service. The USSR already has many positive examples in this respect. For example, in recent years machine building has been supplying thermal power plants of the country with certain types of new equipment whose service lives have been increased 1.7-2.5 times in comparison with the calculated service life and without a worsening of technical-economic parameters. The processes of growth in the length of full-fledged operation of articles are important in other sectors of the national economy too, for example chemistry.

Increasing the life of vehicle tires, for example, from 30,000 to 80,000 kilometers would be equivalent to more than doubling their production with almost identical expenditures of material resources.

Increasing the production of final output from the same volume of material resources, which also indicates the resource-conserving function of scientific-technical progress, is done in several directions, above all by introducing low-waste and no-waste technology. A great deal of attention will be devoted to the development and application of such technologies, which envision complete utilization of available material resources while allowing minimal waste products, in the next 15 years. In this area the USSR already has a considerable scientific-technical backlog. "Nonetheless," Comrade M. S. Gorbachev notes, "wasteful technologies continue to be used on a large scale" [5, p 19].

The problem of switching to resource-conserving technologies is timely for all sectors of material production, including the extracting sectors. The imperfections of the technologies still in use lead to a situation where a significant part of the mineral products are not taken out of the ground during extraction. Up to 60-70 percent of the petroleum, up to 25 percent of the explored coal reserves, and 20 percent of the iron ore are not put into economic circulation [10, p 239]. These material resources, not demanded by society, in fact become waste of the extracting industry and can be put to use only through new scientific-technical concepts. Among the modern techniques of increasing petroleum production from strata, for example, we can note injection methods of influencing petroleum strata, the gas-lift method of well operation, and the use of highly-productive submersible pumps.

Waste metal still occurs in large amounts in machine building and metalworking; half of it is metal shavings. They form mainly as a result of the predominance of mechanical machining over other, resource-conserving techniques. Mechanical working of metal also involves large additional expenditures of electricity and other resources. Converting a ton of metal to shavings requires 420 kilowatt-hours of electricity and uninterrupted operation of 10 lathes for 14 hours. But the continuous cross helical rolling technique for semifinished gear teeth, rings, shafts, and other bodies of rotation makes it possible to reduce allowances for machining and thereby cut metal consumption 20-30 percent by avoiding the conversion of metal into shavings.

The techniques of cold die forging and others produce good results in metal conservation. Reducing losses and waste products in metalworking by just one-half would give a significant economic impact, equivalent to saving 10 percent of the rolled ferrous metal produced in the USSR each year. In the next 15 years steps must be undertaken toward broad application of low-waste and no-waste technologies in the lumber and wood processing industries, production of building materials, agriculture, and other sectors as well.

It would be incorrect to consider the problem of dissemination of low-waste and no-waste technologies only with application to particular production sectors. The USSR economy is a single national economic complex which includes all sectors and this must be kept in mind in approaches to resource supply. Things which represent waste products and lost resources for one sector are a secondary

raw material and energy resources for other sectors. The problem of strengthening intersectorial links in this area is especially important; it is, after all, a matter of enormous volumes of resources. It is common knowledge, for example, that by-products significantly exceed the primary output in some sectors. For example, the ratio of primary and by-product output in ferrous metallurgy and the chemical industry is 1:5.

Utilization of secondary raw materials and energy makes it possible to conserve a substantial amount of primary resources and reduce the public need for them. One ton of scrap ferrous metal conserves the same quantity of metal which is necessary to manufacture a Zhiguli car or 25 bicycles. One ton of broken glass makes it possible to save 300 kilograms of calcined soda. Recycling 40 tons of scrap paper preserves 10 hectares of high-class forest, and one ton of it conserves 4 cubic meters of wood, enough to make 25,000 school notebooks.

Recycling secondary resources not only conserves primary resources but also offers an opportunity for a major reduction in expenditures. For example, where steel is produced on the basis of metal waste products and scrap ferrous metal production costs are 12-15 times lower than when it is produced from ore with a full metallurgical cycle.

At the present time the USSR produces tens of millions of tons of steel, a large quantity of nonferrous metals, and considerable paper and cardboard on the basis of secondary resources. But the problem of collecting and utilizing secondary resources still has not been finally solved. Special difficulties arise where departmental interests conflict: in organizing utilization of such waste products from ferrous and nonferrous metallurgy as flotation tailings, waste from enriching, waste from oil refining and petrochemistry (acid hydrones), waste from the lumber and wood processing industry, and others. At present the share of secondary resources in the USSR raw materials balance is just three percent (by cost) while, according to some calculations, it could be 30 percent. Considering these possibilities, the party set up the program challenge of drawing secondary resources and by-products into economic circulation on a broad scale.

More efficient use of material resources is secured, finally, by multiple use of the final output made from them -- both in its initial form and restored. This refers, for example, to expanding the practice of using reusable wooden crates; each year about 30 million cubic meters of wood is used in the USSR to produce such containers. The remaining 45 million cubic meters of wood used to make containers for the same purpose is at present destroyed. The country would receive an additional savings of 4.5 million cubic meters of wood if it were possible to increase the production of reusable crates by supplanting just 10 of the one-time use containers produced. A major effect would be produced by increasing the service life of machine and equipment parts, for example by spraying superhard alloys with powder as part of restoring them. This technique is especially widespread in the automotive industry and at enterprises of Selkhoztekhnika.

Another very important area of economical and rational use of fuel, energy, and raw and processed materials is allout activation of the human factor in the field of resource conservation.

Activation of the human factor draws fixed attention in light of a number of advantages which appears especially vividly today, when there are still large unused reserves for reducing losses of material resources. For one, a significant proportion -- about 30-40 percent -- of the total possible savings of fuel, energy, and raw and processed materials in the USSR national economy is directly dependent on it. For two, strengthening discipline and order in the primary cells of society -- the labor collective -- under conditions of fuller socialist self-government by the people ensures, as available experience already shows, decisive positive economic changes, including in the sphere of the struggle for economy. In the third place, more active manifestation of the human factor in the area of reducing losses of material resources is not burdensome for the state budget because it does not require large additional capital investment.

In this connection the words of V. I. Lenin resound with special force. He pointed out that communism and the sprouts of new communist production relations emerge "where there is unselfish concern by rank-and-file workers to raise labor productivity and preserve each pood of grain, coal, iron, and other products" [1, Vol 39, p 22].

Persistent work is going forward in the USSR to indoctrinate working people in a thrifty attitude toward each kilogram of fuel, liter of gasoline, and kilowatt-hour of electricity. A consistent struggle is being waged against the careless attitude toward various types of raw materials. Steps are taken regularly to raise the professional level of workers and teach them resource-conservation techniques. The questions of reducing the proportion of defective and low-grade articles in production are given great significance.

The categories of quality and grade of output are similar in economic content, but they are not identical. Whereas quality (the technical level of machines) is characterized by how the output's features match the requirements of standards and technical specifications, the grade as a reflection of the degree of defectiveness of the article (it can also be zero) depends significantly on the professional level and conscientiousness of the working person himself. Raising the grade of articles is one of the most important ways to save material resources because, by securing a longer period of full-fledged use, it prolongs the time of their replacement with new ones, whose manufacture requires additional quantities of energy and raw and processed materials.

The grade of articles produced in the USSR has continued to rise in recent years. But many types of output still are inferior to the best domestic and foreign models in this respect. We still encounter machine building products (engines, electrical motors, combines, planting machines, and others) which have a high degree of defects, which lead to low reliability in operation. Frequent repairs involve additional expenditures of raw material resources for parts and even assemblies designated to replace the ones that have become unusable. This is essentially the result of careless machine assembly which causes poorly tightened or overtightened bushings, brake shoes, corroded gears and axles, and fastening screws to break down quickly. Replacing them demands searching in the national economy for more and more new volumes of material resources, which could be used more rationally. The 27th CPSU Congress gave special attention to these matters. The CPSU Program emphasizes that poor quality and defective goods are a waste of material resources and the people's labor.

The results of the struggle for conservation of material resources at enterprises depend not only on the workers, but also on purposeful actions by economic managers in all elements of the national economy. Solving the problems of establishing the organizational and technological conditions necessary to intensify work on resource conservation in production, construction, transportation, and the service sphere depends directly on the management element which is closely associated with production.

The enterprise administration is given the duty, together with the trade union organization, of more broadly using those functions of socialist competition that are aimed at conservation of material resources. At the present time this facet of competition is underdeveloped at our enterprises; collectives and individual workers assume obligations linked mainly to growth in output, improving the quality of the output produced, and ensuring defect-free production. These obligations by themselves are needed and important, but they should not exhaust the goals of competition. It is by no means accidental that the CPSU Program emphasizes that all-out support for the initiative and creativity of the masses aimed at thrifty use of resources, raising production efficiency and output quality, and lowering its prime cost is extremely important.

Activating the human factor toward conservation of material resources can also have good results in the sphere of material-technical supply. At present the opportunities existing here are not being used adequately. Supply elements generally limit their activity to organizing timely receiving of material allocations, storage for a short time (prolonged storage raises the cost of the storage sphere), and delivery to industry of everything needed to carry out the production program.

At the same time giving supply organizations the functions of monitoring and assisting in conservation of material resources at enterprises as well would make it possible to significantly intensify public production. Their performance of certain production functions aimed at resource conservation can play an especially large role in this respect. After all, we know that discrepancies between enterprise requirements for a resource and the adopted norm of its production sometimes lead to waste. For example, steel is produced in 20-ton rolls at large rolling mills, but sometimes the customer needs only 1-5 tons for an entire year. Enormous rolls of papers do not, as a rule, suit the consumer either by weight or dimensions of the sheet. The manufacturing enterprises do not have the capability of cutting their output into pieces, but when these operations are done at the receiving enterprises a large quantity of waste products results because they are not technically adapted for this (mainly because of the high cost of equipment, which is only used once a year). And often the remnants of the roll together with the spool are thrown away. The national economy incurs a significant loss.

As the experience of the UkSSR shows, activating the human factor at Gosstab enterprises could make a real contribution to solving this critical problem. Enterprise collectives, having organized sections to prepare ferrous metals or paper for production use, would be in a position to break down batches of resources that are delivered and even process them in accordance with requests from the consumer enterprises. This would achieve a significant savings of

metal (22-23 percent) and paper (15 percent). Additional services could be rendered by material-technical supply enterprises for nonferrous metals and chemical, industrial rubber, cable, and lumber and paper output as well.

A good example in this respect has been given by UkSSR Gossnab, which has already organized 90 shops and sections in the republic who render production services to receiver-enterprises in preparing various material resources for use. As a result the standard savings rose 2.3 times in 1980-1985, amounting to 18,600 tons for ferrous metal, 12,900 tons for chemical output, 600 tons of cable and wire, and 1,500 tons of paper. At the present time intersectorial regional centers to prepare metal output for production use are being set up in numerous Ukrainian cities; they will ensure a 15-20 percent reduction in metal consumption.

The third main area of economical and rational use of material resources is structural reorganization of the national economy which ensures a rise in the efficiency of the fuel-raw material system as a whole.

Under current conditions the policy of refining the structure of extraction and production of various energy media is intensifying significantly. To do this capital investment policy is being restructured; one of its priority goals is securing more rapid development of those sectors and subsectors which will make it possible to meet national economic needs more fully and with lower one-time and ongoing expenditures.

The decisions of the 27th CPSU Congress envision rapid development of the system of atomic power plants compared with increasing the capacities of power plants using traditional energy media. By 1990 it is planned to raise the production of electricity to 1,840-1,880 billion kilowatt-hours, including up to 390 billion at atomic power plants [4, p 40]. This means that in just 15 years the share of atomic power in the country's total electricity balance will grow to 20 percent as against 10 percent today. This growth rate for atomic power capacities is a result of their special importance in rationalizing the USSR fuel-energy balance.

Measures that secure a decrease in petroleum fuel requirements of thermal power plants and other consumers work in this same direction. Plans call for a significant reduction in the use of mazut oil as fuel by 1990, especially at thermal power plants.

Nontraditional forms of energy occupy a certain place in the structure of the USSR fuel-energy balance; their role in the national economy will grow. The decisions of the 27th CPSU Congress aim at this. This challenge is important today above all because the energy media that have already been incorporated and widely used -- liquid, solid, and gaseous fuel -- are by nature finite and, no matter how great the reserves of them in the earth may be, they can be depleted. The advantage of the new energy sources -- solar, geothermal, wind, tidal, and biological -- is not just their enormous supplies, but also their practical inexhaustibility. By using them more and more fully and expediently the USSR's energy requirements can be met practically without interruption and for an unlimited period of time.

The nontraditional sources of energy include, among others, solar energy. In certain regions of the USSR which have intensive solar radiation for a long period (the Transcaucasus, Dagestan, the Crimea, and the Central Asian republics) solar energy is already finding some useful application. In the Georgian SSR, for example, solar installations can operate for 6-7 months a year in the eastern part, and even 8 months in the western part, especially on the Black Sea coast. The total area of solar batteries operating at 35 sites today is more than 5,000 square meters. Their operation makes it possible to save more than 1,000 tons of standard fuel annually, and this is chiefly liquid fuel. There are solar installations in operation at sanatoriums, recreation homes, stadiums, race tracks, sovkhozes, and certain industrial enterprises where hot water with a constant temperature of 50-60 degrees C. is needed.

From a technical standpoint solar collectors are not a complex design element. They are boxes lined with thermosoftening plastic with a glass top and filled with flat metallic radiators from which water heated by the sun, replacing cold water, enters a storage tank and is distributed according to plan. But their manufacture is still expensive, and this determines the level of wholesale prices. The still unsolved problems are: the use of inefficient (sometimes outdated and written-off) equipment, the predominance of small-series production of solar installations, and the shortage of qualified cadres.

These questions should receive clear answers in the 12th Five-Year Plan, especially on the basis of widespread introduction of the results of scientific-technical progress into production. In Georgia, for example, it is planned to rebuild the production of solar installations on a progressive technical basis, increasing their level of utility and energy efficiency. Use of solar installations by consumers in combination with other energy sources, for example with heat pumps in the wintertime (in the summer heat pumps operate for indoor air conditioning) will promote a significant increase in the extent of series production of the installations. Studies are being made of ways to combine solar equipment with wind energy installations and the sale of solar units for individual consumers is expanding. Reduction in the cost of producing solar units on the basis of large series production will also be supported by carrying out the recommendation of the republic council on science and scientific-progress of the Central Committee of the Georgian Communist Party (January 1986) that construction of solar installations in housing and cultural-domestic buildings be envisioned already in the planning stage. Special attention should be given to the need to improve the professional skills of workers engaged in the production of solar installations.

The public need for raw material resources can also be met by their various mutually replaceable types, which are characterized by unequal production expenditures and correspondence to the goal of resource conservation. For example, the group of construction design materials offers a broad range of possibilities for producing and using more economical articles that ensure resource conservation in all its respects. So the production of finished rolled ferrous metal products will increase by just over 8 percent by 1990, while low-alloy steel will rise by almost one-third, cold-rolled sheet steel by more than 20 percent, and thermohardened rolled products by more than 70 percent. At the same time the prerequisites will emerge for expanding resource conservation in the metal consuming sectors as well. For example, more rapid growth in the

production of rolled sheet metal will make it possible to supplant metal-cutting lathes with forge-press equipment whose use will ensure a savings of metal.

In nonferrous metallurgy faster rates of development are planned for aluminum and tungsten-molybdenum industry and the production of metal powders, which will make it possible to expand the application of resource conserving technologies and the manufacture of parts and machines with metal-conserving features. More rapid growth in the production of chipboard with oriented chips, which has greater strength, may be used more broadly in the automotive industry and railroad car building to replace expensive glued plywood.

The production of polymer materials is receiving accelerated development; they make it possible not only to save metal but also to apply new resource-conserving design concepts. The use of plastics enables the national economy to save 3-5 tons of steel for each ton of plastic and significantly lighten the weight of machinery and equipment, which provides a savings of fuel-energy resources in the process of operation. It should be observed that the production of one ton of plastic requires one-third to one-half the energy resources needed to produce the same quantity of parts from metal. The use of progressive chemical materials in construction, the building materials industry, and pulp-paper and wood processing industry will also provide a significant savings of rolled metal, cement, and lumber.

Fulfillment of the designs of the 27th CPSU Congress in the area of economic and rational use of material resources in the period 1986-1990 and the period until the year 2000 is one of the most significant material prerequisites for a decisive intensification of USSR public production on the basis of broad application of scientific-technical progress.

BIBLIOGRAPHY

1. Lenin, V. I., "Poln sobr. soch." [Complete Works].
2. Gorbachev, M. S., "Politicheskiiy doklad Tsentralnogo Komiteta KPSS XXVII syezdu Kommunisticheskoy partii Sovetskogo Soyuz" [Political Report of the CPSU Central Committee to the 27th Congress of the Communist Party of the Soviet Union], Moscow, Politizdat, 1986, p 54.
3. "Programma Kommunisticheskoy partii Sovetskogo Soyuz. Novaya redaktsiya" [Program of the Communist Party of the Soviet Union. New Edition], Moscow, Politizdat, 1986.
4. "Osnovnyye napravleniya ekonomicheskogo i sotsialnogo razvitiya SSSR na 1986-1990 gody i na period do 2000 goda" [Basic Directions of Economic and Social Development of the USSR in 1986-1990 and the Period until the Year 2000], Moscow, Politizdat, 1986.
5. Gorbachev, M. S., "Statement at the Meeting of Party and Economic Activists of Tyumen and Tomsk Oblasts on 6 September 1986," KOMMUNIST, 1985, No 14.
6. "The 4th Session of the USSR Supreme Soviet, 11th Convocation. Report of General Secretary of the CPSU Committee Deputy M. S. Gorbachev," KOMMUNIST, 1985, No 17.

7. "The State Plan of Economic and Social Development of the USSR for 1986 and Fulfillment of the Plan in 1985. Report of First Deputy Chairman of the USSR Council of Ministers and Chairman of USSR Gosplan Deputy N. V. Talyzin," EKONOMICHESKAYA GAZETA, 1985, No 48, supplement.
8. Aganbegyan, A. F., "Upravleniye i effektivnost" [Management and Efficiency], Moscow, Ekonomika, 1981.
9. Zakharov, A. N., and Grachev, I. I., "Snizheniye materialoemkosti proizvodstva" [Lowering the Material-Intensiveness of Production], Moscow, Profizdat, 1983.
10. Belousov, R. A., and Pavlyuchenko, V. I. (editors), "Ekonomiya resursov. Opyt sotsialisticheskikh stran" [Resource Conservation. The Experience of the Socialist Countries], Moscow, Progress, 1984.
11. "Party Economy Strategy," POLIT. SAMOOBRAZOVANIYE, 1986, No. 1.

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